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L22D

DESCHUTES IRRIGATION PROJECT, OREGON  
Classes of Land According to Use  
Capability, Irrigation Presumed  
Feasible.



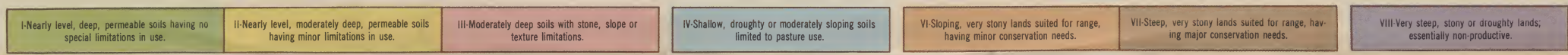
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SOIL CONSERVATION SERVICE WASHINGTON, D. C.  
- 300 - APRIL 1946



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27-Soil type, Madras sandy loam, C-Slips, 8 percent to 12 percent.  
2-Sheet cross-section, 25 percent to 75 percent first, R-Wind erosion, 25 percent to 75 percent removed by wind.

## SOILS

### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Eri sandy loam
- 13- Deschutes heavy sand
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes stony sandy loam
- 19- Deschutes stony loam
- 343- Eri stony sandy loam

### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase
- 10e- Deschutes sandy loam, shallow phase
- 18- Madras sandy loam, deep phase
- 12c- Deschutes sandy loam, deep phase
- 13- Madras stony sandy loam
- 13e- Deschutes stony sandy loam
- 90- Deschutes stony sandy loam
- 26- Deschutes heavy sand
- 3e- Deschutes heavy sand
- 24- Deschutes heavy sand

- 27- Madras sandy loam
- 11e- Deschutes sandy loam
- 25- Deschutes sandy loam
- 28- Madras loam

### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 15- Metolius sandy loam
- 47- Deschutes heavy coarse sand
- 48- Deschutes heavy sand
- 49- Deschutes coarse sand loam
- 68- Deschutes heavy sand over riverwash

### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIDDLE MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonia loam
- 31- Lamonia sandy clay loam
- 32- Lamonia stony sandy clay loam
- 33- Lamonia stony loam
- 34- Lamonia sandy clay loam, shallow phase
- 84- Lamonia loam, shallow phase

### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam
- 37- Agency gravelly loam
- 70- Gert loam
- 46- Agency loam
- 83- Agency sandy loam
- 71- Gert sandy loam
- 75- Gert clay loam, shallow phase

### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 59- Matine loam
- 40- Madras sandy loam
- 66- Matine stony loam
- 85- Matine clay loam

### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42- Metolius sandy loam
- 60- Metolius sandy loam
- 61- Metolius fine sandy loam

- 62- Metolius sandy loam
- 92- Metolius heavy sand
- 6X- Laidlaw sandy loam

### POORLY DRAINAGE, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51- Gert clay loam
- 52- Gert sandy loam

### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74- Redmond loam
- 75- Redmond sandy loam
- 76- Redmond sandy loam, deep phase
- 77- Redmond clay loam

### MISCELLANEOUS SOILS

- 100- Rough broken land
- 200- Rough stony land
- RW- Riverwash
- 91- Volcanic ash
- 1- Seabland

## EROSION

### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 75 percent of the surface soil lost
- 3- 75 percent to 100 percent of the surface soil lost
- 4- 25 percent to 50 percent of the B horizon lost

### GULLY EROSION

- 7- Occasional gullies
- 12- Occasional gullies, uncommonly by farm machinery
- 13- Shallow gullies less than 100 feet apart, laterally by more than 3 feet
- 18- Uncontrolled gullies less than 100 feet apart, laterally by more than 3 feet

### WIND EROSION

- P- Up to 25 percent of surface soil removed
- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

### WIND DEPOSITS

- F- Accumulations, 0 inches to 6 inches deep, level
- H- Accumulations, 6 inches to 12 inches deep, level
- K- Accumulations, 6 inches to 12 inches deep, hummocky
- Line accumulations too coarse to describe within boundaries

### MISCELLANEOUS

- W- Hardpan
- O- No accumulation
- B- Un differentiated erosion (unimproved, unimproved)

## LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, fruits, trees and shrubs.

Range land, land formerly cultivated but now abandoned in annual crops, cropland, forest, grasses or brush.

Range land, Annual or perennial grasses or shrubs.

Woodland, Juniper or Ponderosa pine

Idle land

Farmed and wooded area

## SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads (non-surfaced)
- Semihard surfaced
- Dirt (good motor)
- Dirt (poor motor, or elevated)
- Bridge
- Culvert
- Flood
- Railroads (Single track)

### WORKS AND STRUCTURES

- Railroads (Abandoned)
- Bridge
- Slope crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tank
- Power line
- Telephone line
- Pipe line
- Cemetery
- Dam
- Gravel pit
- Mine quarry

### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Survey boundary
- Stem area
- Extremity

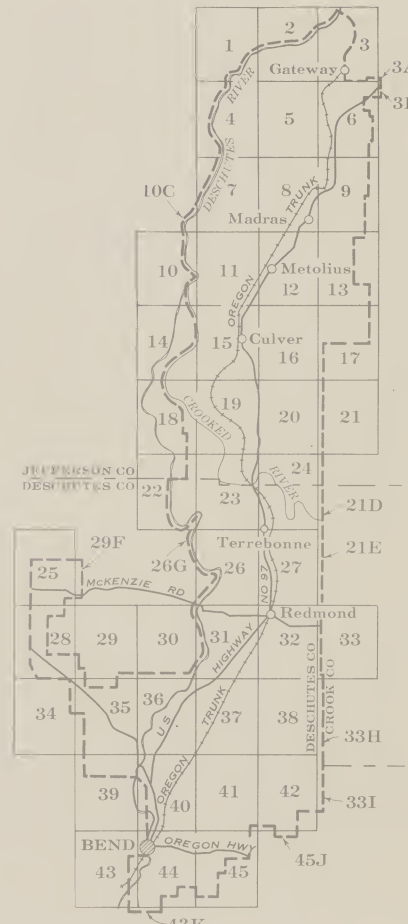
### DRAINAGE

- Potential stream
- Intermittent stream
- Channel or ditch
- Canal tunnel
- Water tank
- Well
- Ponds, reservoirs
- Spring
- Sink
- Marsh

### CONSERVATION SURVEY DATA

- Survey boundary
- Stem area
- Extremity

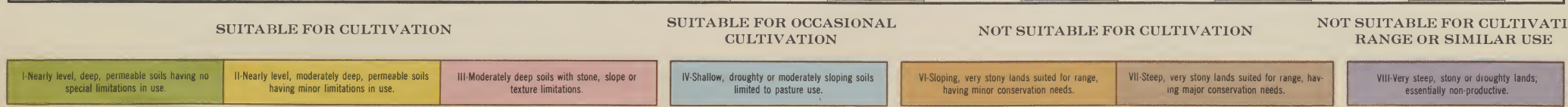
### INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

From U.S.G.S. Revisions, Revised in 1960 and amended to comply with Soil Conservation Service from aerial photographs. Lambert projection. Contour interval 100 feet (except 2000 feet). All elevations are in feet above sea level. All distances are in feet unless otherwise noted.

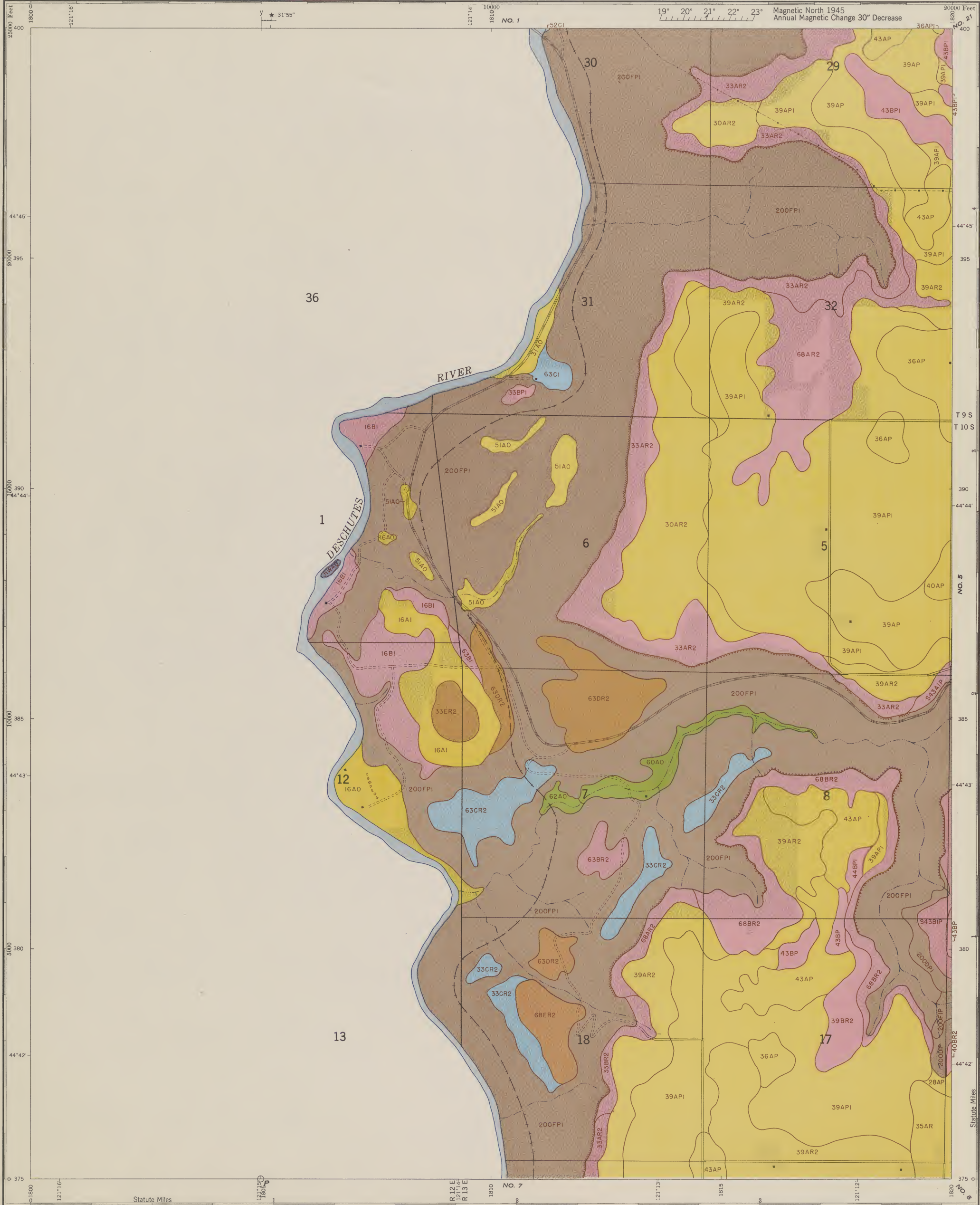












SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands; essentially non-productive. |
|---|--|---|--|---|--|---|



DESCHUTES IRRIGATION PROJECT  
Scale 1:15,840

LEGEND

EXPLANATION OF SYMBOL

27-80R  
27-80R Type, Madras sandy loam, 0-80R, 8 percent to 12 percent  
2-80R, 25 percent to 75 percent (all R-Wind blown, 25 percent to 75 percent (all R-Wind)

SOILS

LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 - Deschutes sandy loam, shallow phase
- 3 - Deschutes sandy loam
- 43 - Deschutes sandy loam
- 4 - Deschutes sandy loam, deep phase
- 5 - Deschutes sandy loam, deep phase
- 19 - Deschutes sandy loam
- S43 - Deschutes sandy loam

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 - Deschutes sandy loam, shallow phase
- 11 - Deschutes sandy loam, shallow phase
- 12 - Deschutes sandy loam, deep phase
- 13 - Deschutes sandy loam, deep phase
- 14 - Deschutes sandy loam, deep phase
- 15 - Deschutes sandy loam, deep phase
- 16 - Deschutes sandy loam, deep phase
- 17 - Deschutes sandy loam, deep phase
- 18 - Deschutes sandy loam, deep phase
- 19 - Deschutes sandy loam, deep phase
- 20 - Deschutes sandy loam, deep phase
- 21 - Deschutes sandy loam, deep phase
- 22 - Deschutes sandy loam, deep phase
- 23 - Deschutes sandy loam, deep phase
- 24 - Deschutes sandy loam, deep phase

LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16 - Deschutes sandy loam
- 47 - Deschutes sandy loam, deep phase
- 48 - Deschutes sandy loam, deep phase
- 49 - Deschutes sandy loam, deep phase
- 50 - Deschutes sandy loam, deep phase

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 31 - Deschutes sandy loam, deep phase
- 32 - Deschutes sandy loam, deep phase
- 33 - Deschutes sandy loam, deep phase
- 34 - Deschutes sandy loam, deep phase
- 35 - Deschutes sandy loam, deep phase

LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 45 - Deschutes sandy loam
- 46 - Deschutes sandy loam
- 47 - Deschutes sandy loam
- 48 - Deschutes sandy loam
- 49 - Deschutes sandy loam
- 50 - Deschutes sandy loam
- 51 - Deschutes sandy loam
- 52 - Deschutes sandy loam

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME MARSH

- 39 - Deschutes sandy loam
- 40 - Deschutes sandy loam
- 41 - Deschutes sandy loam
- 42 - Deschutes sandy loam
- 43 - Deschutes sandy loam

LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 44 - Deschutes sandy loam
- 45 - Deschutes sandy loam
- 46 - Deschutes sandy loam
- 47 - Deschutes sandy loam

POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 53 - Deschutes sandy loam
- 54 - Deschutes sandy loam
- 55 - Deschutes sandy loam
- 56 - Deschutes sandy loam
- 57 - Deschutes sandy loam
- 58 - Deschutes sandy loam
- 59 - Deschutes sandy loam
- 60 - Deschutes sandy loam

LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 - Deschutes sandy loam
- 75 - Deschutes sandy loam
- 76 - Deschutes sandy loam
- 77 - Deschutes sandy loam
- 78 - Deschutes sandy loam

MISCELLANEOUS SOILS

- 100 - Deschutes sandy loam
- 200 - Deschutes sandy loam
- 300 - Deschutes sandy loam
- 400 - Deschutes sandy loam
- 500 - Deschutes sandy loam
- 600 - Deschutes sandy loam
- 700 - Deschutes sandy loam
- 800 - Deschutes sandy loam
- 900 - Deschutes sandy loam
- 1000 - Deschutes sandy loam

EROSION

SHEET EROSION

- 1 - Less than 25 percent of the surface soil lost
- 2 - 25 percent to 75 percent of the surface soil lost
- 3 - 75 percent to 100 percent of the surface soil lost
- 4 - 25 percent to 75 percent of the surface soil lost
- 5 - 75 percent to 100 percent of the surface soil lost

GULLY EROSION

- 6 - Deschutes sandy loam, shallow phase
- 7 - Deschutes sandy loam, shallow phase
- 8 - Deschutes sandy loam, shallow phase
- 9 - Deschutes sandy loam, shallow phase
- 10 - Deschutes sandy loam, shallow phase
- 11 - Deschutes sandy loam, shallow phase
- 12 - Deschutes sandy loam, shallow phase
- 13 - Deschutes sandy loam, shallow phase
- 14 - Deschutes sandy loam, shallow phase
- 15 - Deschutes sandy loam, shallow phase
- 16 - Deschutes sandy loam, shallow phase
- 17 - Deschutes sandy loam, shallow phase
- 18 - Deschutes sandy loam, shallow phase
- 19 - Deschutes sandy loam, shallow phase
- 20 - Deschutes sandy loam, shallow phase
- 21 - Deschutes sandy loam, shallow phase
- 22 - Deschutes sandy loam, shallow phase
- 23 - Deschutes sandy loam, shallow phase
- 24 - Deschutes sandy loam, shallow phase

WIND EROSION

- A - Up to 25 percent of the surface soil removed
- B - 25 percent to 75 percent of the surface soil removed
- C - 75 percent to 100 percent of the surface soil removed

WIND DEPOSITS

- F - Accumulation of fine sand to 1/2 inch deep
- H - Accumulation of fine sand to 1/2 inch deep
- K - Accumulation of fine sand to 1/2 inch deep
- L - Accumulation of fine sand to 1/2 inch deep
- M - Accumulation of fine sand to 1/2 inch deep
- N - Accumulation of fine sand to 1/2 inch deep
- O - Accumulation of fine sand to 1/2 inch deep
- P - Accumulation of fine sand to 1/2 inch deep
- Q - Accumulation of fine sand to 1/2 inch deep
- R - Accumulation of fine sand to 1/2 inch deep
- S - Accumulation of fine sand to 1/2 inch deep
- T - Accumulation of fine sand to 1/2 inch deep
- U - Accumulation of fine sand to 1/2 inch deep
- V - Accumulation of fine sand to 1/2 inch deep
- W - Accumulation of fine sand to 1/2 inch deep
- X - Accumulation of fine sand to 1/2 inch deep
- Y - Accumulation of fine sand to 1/2 inch deep
- Z - Accumulation of fine sand to 1/2 inch deep

MISCELLANEOUS

- W - Accumulation of fine sand to 1/2 inch deep
- X - Accumulation of fine sand to 1/2 inch deep
- Y - Accumulation of fine sand to 1/2 inch deep
- Z - Accumulation of fine sand to 1/2 inch deep

LAND USE

Reprinted in gray

Deschutes sandy loam and potential areas with  
in grain view of Deschutes, Creek and Gravel

Deschutes sandy loam (formerly cultivated but now abandoned  
in annual grain view of Deschutes, Creek and Gravel)

Deschutes sandy loam (formerly cultivated but now abandoned  
in annual grain view of Deschutes, Creek and Gravel)

Deschutes sandy loam (formerly cultivated but now abandoned  
in annual grain view of Deschutes, Creek and Gravel)

Deschutes sandy loam

Deschutes sandy loam

SLOPE

Dominant Percent	Dominant Percent
A - 0 to 4	D - 11 to 20
B - 4 to 7	E - 20 to 25
C - 7 to 12	F - 25 to 35
	G - 35 to 40

GEOGRAPHIC SYMBOLS

WORKS AND STRUCTURES

- Roads - Hard-surfaced
- Roads - Soft-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Canal
- Ford
- Railroads - Single track

WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Urban building
- Railroad trestle
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

WORKS AND STRUCTURES

- Trails
- Power line
- Telephone line
- Rice line
- Cemetery
- Dams
- Gravel pit
- Mine quarry

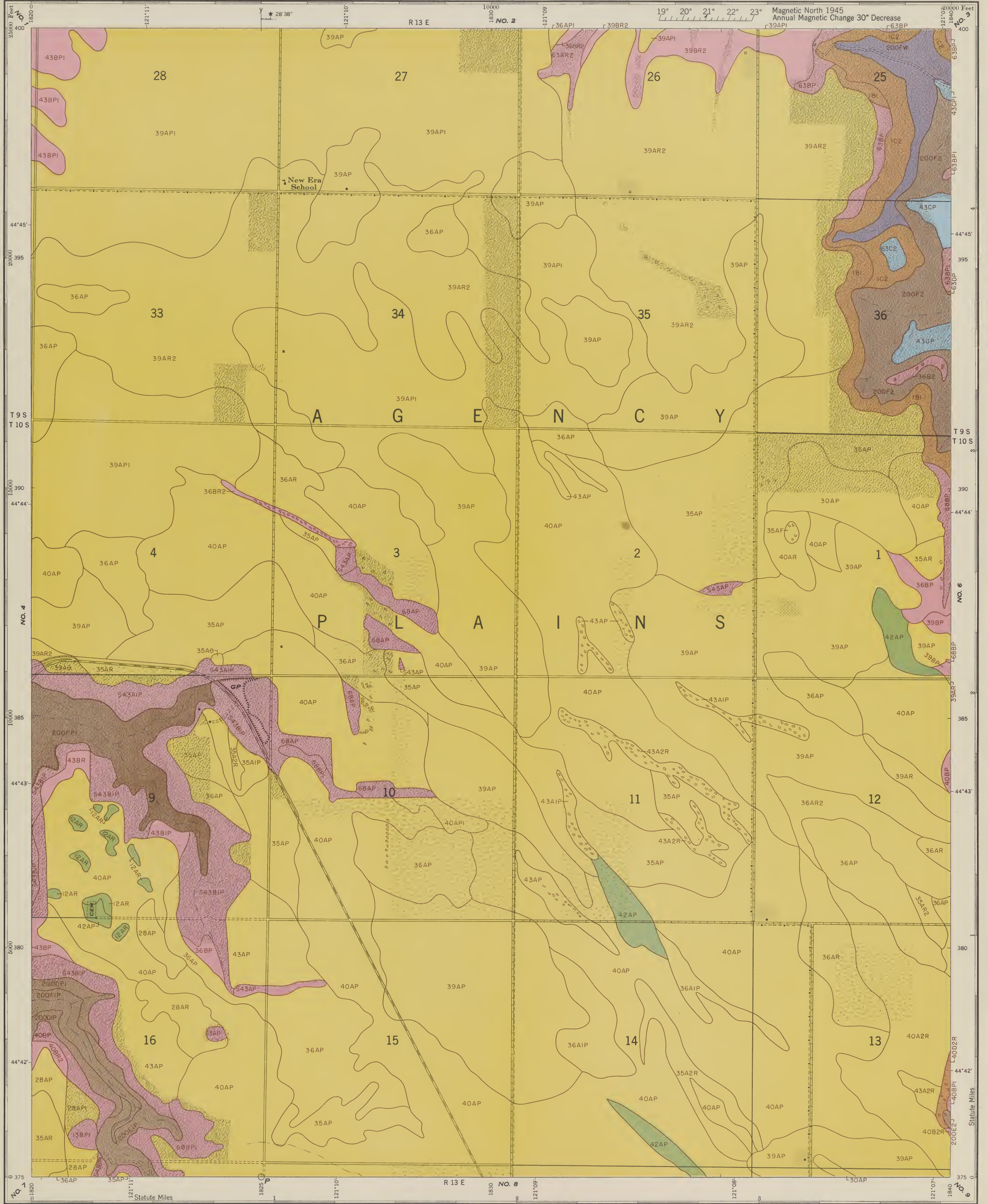
BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stone wall
- Rock boundary
- Electricity

DRAINAGE

- Major stream
- Intermittent stream
- Canal or ditch
- Canal tunnel
- Water tank
- Well
- Rivets, reservoir
- Spring
- Sink
- Nation





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27-2R  
27-2R (w/ Madras sandy loam) D-3 (Silt) 8 percent to 12 percent  
2-2 (Silt) 25 percent to 75 percent (w/ R-1 (Wind erosion) 25 percent to 75 percent removed) by silt.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Eri sandy loam
- 13- Deschutes sandy loam
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes sandy loam, deep phase
- 39- Deschutes sandy loam
- 543- Deschutes sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 11- Madras sandy loam, shallow phase
- 10- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
- 13- Deschutes sandy loam, deep phase
- 14- Madras sandy loam, deep phase
- 15- Deschutes sandy loam, deep phase
- 16- Deschutes sandy loam, deep phase
- 17- Deschutes sandy loam, deep phase
- 18- Deschutes sandy loam, deep phase
- 19- Deschutes sandy loam, deep phase
- 20- Deschutes sandy loam, deep phase
- 21- Deschutes sandy loam, deep phase
- 22- Deschutes sandy loam, deep phase
- 23- Deschutes sandy loam, deep phase
- 24- Deschutes sandy loam, deep phase
- 25- Deschutes sandy loam, deep phase
- 26- Deschutes sandy loam, deep phase
- 27- Deschutes sandy loam, deep phase
- 28- Deschutes sandy loam, deep phase
- 29- Deschutes sandy loam, deep phase
- 30- Deschutes sandy loam, deep phase
- 31- Deschutes sandy loam, deep phase
- 32- Deschutes sandy loam, deep phase
- 33- Deschutes sandy loam, deep phase
- 34- Deschutes sandy loam, deep phase
- 35- Deschutes sandy loam, deep phase
- 36- Deschutes sandy loam, deep phase
- 37- Deschutes sandy loam, deep phase
- 38- Deschutes sandy loam, deep phase
- 39- Deschutes sandy loam, deep phase
- 40- Deschutes sandy loam, deep phase
- 41- Deschutes sandy loam, deep phase
- 42- Deschutes sandy loam, deep phase
- 43- Deschutes sandy loam, deep phase
- 44- Deschutes sandy loam, deep phase
- 45- Deschutes sandy loam, deep phase

- 27- Madras sandy loam
- 11- Deschutes sandy loam
- 25- Deschutes sandy loam
- 28- Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER COARSE MATERIALS

- 16- Madras sandy loam
- 47- Deschutes sandy loam, deep phase
- 48- Deschutes sandy loam, deep phase
- 49- Deschutes sandy loam, deep phase
- 50- Deschutes sandy loam, deep phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30- Lamona loam
- 31- Lamona sandy loam
- 32- Lamona sandy loam, deep phase
- 33- Lamona sandy loam, deep phase
- 34- Lamona sandy loam, deep phase
- 35- Lamona sandy loam, deep phase
- 36- Lamona sandy loam, deep phase
- 37- Lamona sandy loam, deep phase
- 38- Lamona sandy loam, deep phase
- 39- Lamona sandy loam, deep phase
- 40- Lamona sandy loam, deep phase
- 41- Lamona sandy loam, deep phase
- 42- Lamona sandy loam, deep phase
- 43- Lamona sandy loam, deep phase
- 44- Lamona sandy loam, deep phase
- 45- Lamona sandy loam, deep phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam
- 37- Agency sandy loam
- 70- Gem loam
- 38- Agency loam
- 63- Agency sandy loam
- 71- Gem clay loam
- 73- Gem clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39- Madras loam
- 40- Madras sandy loam
- 45- Madras sandy loam
- 46- Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42- Madras sandy loam
- 43- Madras sandy loam
- 44- Madras sandy loam
- 45- Madras sandy loam

- 60- Madras sandy loam
- 61- Madras sandy loam
- 62- Madras sandy loam
- 63- Madras sandy loam
- 64- Madras sandy loam
- 65- Madras sandy loam
- 66- Madras sandy loam
- 67- Madras sandy loam
- 68- Madras sandy loam
- 69- Madras sandy loam
- 70- Madras sandy loam
- 71- Madras sandy loam
- 72- Madras sandy loam
- 73- Madras sandy loam
- 74- Madras sandy loam
- 75- Madras sandy loam
- 76- Madras sandy loam
- 77- Madras sandy loam
- 78- Madras sandy loam
- 79- Madras sandy loam
- 80- Madras sandy loam
- 81- Madras sandy loam
- 82- Madras sandy loam
- 83- Madras sandy loam
- 84- Madras sandy loam
- 85- Madras sandy loam
- 86- Madras sandy loam
- 87- Madras sandy loam
- 88- Madras sandy loam
- 89- Madras sandy loam
- 90- Madras sandy loam
- 91- Madras sandy loam
- 92- Madras sandy loam
- 93- Madras sandy loam
- 94- Madras sandy loam
- 95- Madras sandy loam
- 96- Madras sandy loam
- 97- Madras sandy loam
- 98- Madras sandy loam
- 99- Madras sandy loam
- 100- Madras sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOILS OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51- Olin clay loam
- 52- Olin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74- Redmond loam
- 75- Redmond sandy loam
- 76- Redmond sandy loam, deep phase
- 77- Redmond sandy loam, deep phase
- 78- Redmond sandy loam, deep phase
- 79- Redmond sandy loam, deep phase
- 80- Redmond sandy loam, deep phase
- 81- Redmond sandy loam, deep phase
- 82- Redmond sandy loam, deep phase
- 83- Redmond sandy loam, deep phase
- 84- Redmond sandy loam, deep phase
- 85- Redmond sandy loam, deep phase
- 86- Redmond sandy loam, deep phase
- 87- Redmond sandy loam, deep phase
- 88- Redmond sandy loam, deep phase
- 89- Redmond sandy loam, deep phase
- 90- Redmond sandy loam, deep phase
- 91- Redmond sandy loam, deep phase
- 92- Redmond sandy loam, deep phase
- 93- Redmond sandy loam, deep phase
- 94- Redmond sandy loam, deep phase
- 95- Redmond sandy loam, deep phase
- 96- Redmond sandy loam, deep phase
- 97- Redmond sandy loam, deep phase
- 98- Redmond sandy loam, deep phase
- 99- Redmond sandy loam, deep phase
- 100- Redmond sandy loam, deep phase

#### MISCELLANEOUS SOILS

- 100- Madras sandy loam
- 101- Madras sandy loam
- 102- Madras sandy loam
- 103- Madras sandy loam
- 104- Madras sandy loam
- 105- Madras sandy loam
- 106- Madras sandy loam
- 107- Madras sandy loam
- 108- Madras sandy loam
- 109- Madras sandy loam
- 110- Madras sandy loam
- 111- Madras sandy loam
- 112- Madras sandy loam
- 113- Madras sandy loam
- 114- Madras sandy loam
- 115- Madras sandy loam
- 116- Madras sandy loam
- 117- Madras sandy loam
- 118- Madras sandy loam
- 119- Madras sandy loam
- 120- Madras sandy loam
- 121- Madras sandy loam
- 122- Madras sandy loam
- 123- Madras sandy loam
- 124- Madras sandy loam
- 125- Madras sandy loam
- 126- Madras sandy loam
- 127- Madras sandy loam
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- 135- Madras sandy loam
- 136- Madras sandy loam
- 137- Madras sandy loam
- 138- Madras sandy loam
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- 142- Madras sandy loam
- 143- Madras sandy loam
- 144- Madras sandy loam
- 145- Madras sandy loam
- 146- Madras sandy loam
- 147- Madras sandy loam
- 148- Madras sandy loam
- 149- Madras sandy loam
- 150- Madras sandy loam

### EROSION

#### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 45 percent of the surface soil lost
- 3- 45 percent to 75 percent of the surface soil lost
- 4- 75 percent to 100 percent of the surface soil lost
- 5- 100 percent of the surface soil lost

#### GULCH EROSION

- 7- Occasional gullies
- 8- Occasional gullies, uncommon by farm machinery
- 9- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 10- Uncommon gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- 1- Up to 25 percent of surface soil removed
- 2- 25 percent to 50 percent of surface soil removed
- 3- 50 percent to 75 percent of surface soil removed
- 4- 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- 1- Accumulation of 0 inches to 12 inches deep, level
- 2- Accumulation of 12 inches to 24 inches deep, level
- 3- Accumulation of 24 inches to 36 inches deep, level
- 4- Accumulation of 36 inches to 48 inches deep, level
- 5- Accumulation of 48 inches to 60 inches deep, level
- 6- Accumulation of 60 inches to 72 inches deep, level
- 7- Accumulation of 72 inches to 84 inches deep, level
- 8- Accumulation of 84 inches to 96 inches deep, level
- 9- Accumulation of 96 inches to 108 inches deep, level
- 10- Accumulation of 108 inches to 120 inches deep, level
- 11- Accumulation of 120 inches to 132 inches deep, level
- 12- Accumulation of 132 inches to 144 inches deep, level
- 13- Accumulation of 144 inches to 156 inches deep, level
- 14- Accumulation of 156 inches to 168 inches deep, level
- 15- Accumulation of 168 inches to 180 inches deep, level
- 16- Accumulation of 180 inches to 192 inches deep, level
- 17- Accumulation of 192 inches to 204 inches deep, level
- 18- Accumulation of 204 inches to 216 inches deep, level
- 19- Accumulation of 216 inches to 228 inches deep, level
- 20- Accumulation of 228 inches to 240 inches deep, level
- 21- Accumulation of 240 inches to 252 inches deep, level
- 22- Accumulation of 252 inches to 264 inches deep, level
- 23- Accumulation of 264 inches to 276 inches deep, level
- 24- Accumulation of 276 inches to 288 inches deep, level
- 25- Accumulation of 288 inches to 300 inches deep, level
- 26- Accumulation of 300 inches to 312 inches deep, level
- 27- Accumulation of 312 inches to 324 inches deep, level
- 28- Accumulation of 324 inches to 336 inches deep, level
- 29- Accumulation of 336 inches to 348 inches deep, level
- 30- Accumulation of 348 inches to 360 inches deep, level
- 31- Accumulation of 360 inches to 372 inches deep, level
- 32- Accumulation of 372 inches to 384 inches deep, level
- 33- Accumulation of 384 inches to 396 inches deep, level
- 34- Accumulation of 396 inches to 408 inches deep, level
- 35- Accumulation of 408 inches to 420 inches deep, level
- 36- Accumulation of 420 inches to 432 inches deep, level
- 37- Accumulation of 432 inches to 444 inches deep, level
- 38- Accumulation of 444 inches to 456 inches deep, level
- 39- Accumulation of 456 inches to 468 inches deep, level
- 40- Accumulation of 468 inches to 480 inches deep, level
- 41- Accumulation of 480 inches to 492 inches deep, level
- 42- Accumulation of 492 inches to 504 inches deep, level
- 43- Accumulation of 504 inches to 516 inches deep, level
- 44- Accumulation of 516 inches to 528 inches deep, level
- 45- Accumulation of 528 inches to 540 inches deep, level
- 46- Accumulation of 540 inches to 552 inches deep, level
- 47- Accumulation of 552 inches to 564 inches deep, level
- 48- Accumulation of 564 inches to 576 inches deep, level
- 49- Accumulation of 576 inches to 588 inches deep, level
- 50- Accumulation of 588 inches to 600 inches deep, level
- 51- Accumulation of 600 inches to 612 inches deep, level
- 52- Accumulation of 612 inches to 624 inches deep, level
- 53- Accumulation of 624 inches to 636 inches deep, level
- 54- Accumulation of 636 inches to 648 inches deep, level
- 55- Accumulation of 648 inches to 660 inches deep, level
- 56- Accumulation of 660 inches to 672 inches deep, level
- 57- Accumulation of 672 inches to 684 inches deep, level
- 58- Accumulation of 684 inches to 696 inches deep, level
- 59- Accumulation of 696 inches to 708 inches deep, level
- 60- Accumulation of 708 inches to 720 inches deep, level
- 61- Accumulation of 720 inches to 732 inches deep, level
- 62- Accumulation of 732 inches to 744 inches deep, level
- 63- Accumulation of 744 inches to 756 inches deep, level
- 64- Accumulation of 756 inches to 768 inches deep, level
- 65- Accumulation of 768 inches to 780 inches deep, level
- 66- Accumulation of 780 inches to 792 inches deep, level
- 67- Accumulation of 792 inches to 804 inches deep, level
- 68- Accumulation of 804 inches to 816 inches deep, level
- 69- Accumulation of 816 inches to 828 inches deep, level
- 70- Accumulation of 828 inches to 840 inches deep, level
- 71- Accumulation of 840 inches to 852 inches deep, level
- 72- Accumulation of 852 inches to 864 inches deep, level
- 73- Accumulation of 864 inches to 876 inches deep, level
- 74- Accumulation of 876 inches to 888 inches deep, level
- 75- Accumulation of 888 inches to 900 inches deep, level
- 76- Accumulation of 900 inches to 912 inches deep, level
- 77- Accumulation of 912 inches to 924 inches deep, level
- 78- Accumulation of 924 inches to 936 inches deep, level
- 79- Accumulation of 936 inches to 948 inches deep, level
- 80- Accumulation of 948 inches to 960 inches deep, level
- 81- Accumulation of 960 inches to 972 inches deep, level
- 82- Accumulation of 972 inches to 984 inches deep, level
- 83- Accumulation of 984 inches to 996 inches deep, level
- 84- Accumulation of 996 inches to 1008 inches deep, level
- 85- Accumulation of 1008 inches to 1020 inches deep, level
- 86- Accumulation of 1020 inches to 1032 inches deep, level
- 87- Accumulation of 1032 inches to 1044 inches deep, level
- 88- Accumulation of 1044 inches to 1056 inches deep, level
- 89- Accumulation of 1056 inches to 1068 inches deep, level
- 90- Accumulation of 1068 inches to 1080 inches deep, level
- 91- Accumulation of 1080 inches to 1092 inches deep, level
- 92- Accumulation of 1092 inches to 1104 inches deep, level
- 93- Accumulation of 1104 inches to 1116 inches deep, level
- 94- Accumulation of 1116 inches to 1128 inches deep, level
- 95- Accumulation of 1128 inches to 1140 inches deep, level
- 96- Accumulation of 1140 inches to 1152 inches deep, level
- 97- Accumulation of 1152 inches to 1164 inches deep, level
- 98- Accumulation of 1164 inches to 1176 inches deep, level
- 99- Accumulation of 1176 inches to 1188 inches deep, level
- 100- Accumulation of 1188 inches to 1200 inches deep, level

#### MISCELLANEOUS

- 1- Normal erosion
- 2- Unconsolidated erosion
- 3- Unconsolidated erosion (unconsolidated)
- 4- Unconsolidated erosion (unconsolidated)
- 5- Unconsolidated erosion (unconsolidated)
- 6- Unconsolidated erosion (unconsolidated)
- 7- Unconsolidated erosion (unconsolidated)
- 8- Unconsolidated erosion (unconsolidated)
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- 95- Unconsolidated erosion (unconsolidated)
- 96- Unconsolidated erosion (unconsolidated)
- 97- Unconsolidated erosion (unconsolidated)
- 98- Unconsolidated erosion (unconsolidated)
- 99- Unconsolidated erosion (unconsolidated)
- 100- Unconsolidated erosion (unconsolidated)

### LAND USE

Reproduce in gray

Cultivated land, annual and perennial crops, such as wheat, corn, alfalfa, clover and grasses.

Rangeland, land formerly cultivated but now used for pasture, orchards, vineyards, etc.

Recreation, Amusement, etc.

Wetlands, etc.

Water

Perennial vegetation and

### SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	12 to 20
B	4 to 7	E	21 to 30
C	8 to 12	F	31 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

- Roads: Hard-surfaced
- Semi-hard-surfaced
- Dirt (good major)
- Dirt (poor minor or private)
- Bridge
- Culvert
- Fault
- Railroads: Single track

#### WORKS AND STRUCTURES

- Railroads: Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings: General
- Church
- School

#### WORKS AND STRUCTURES

- Tailrace
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dam
- Gravel pit
- Mineral quarry

#### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in present)
- Survey boundary
- State area
- Boundary

#### DRAINAGE

- Stream
- Intermittent stream
- Channel
- Canal
- Water tank
- Pond, reservoir
- Spring
- Marsh

Water

Water

Water

Water

Water

Water

Water

Water

Water

Water

Water

Water

Water

Water

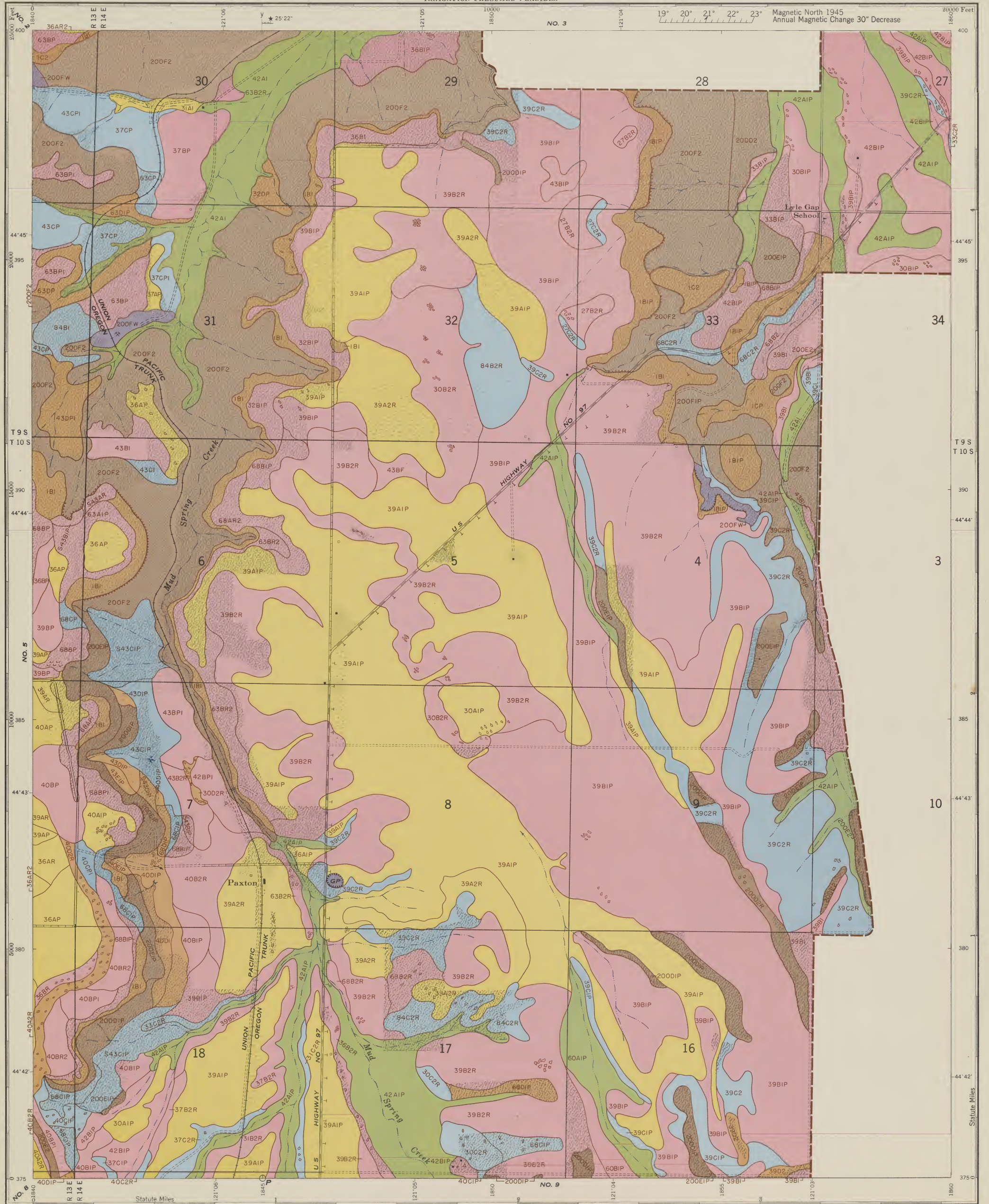
Water

Water

Water

Water





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- I-Nearly level, deep, permeable soils having no special limitations in use.
- II-Nearly level, moderately deep, permeable soils having minor limitations in use.
- III-Moderately deep soils with stone, slope or texture limitations.
- IV-Shallow, droughty or moderately sloping soils limited to pasture use.
- VI-Sloping, very stony lands suited for range, having minor conservation needs.
- VII-Steep, very stony lands suited for range, having major conservation needs.
- VIII-Very steep, stony or droughty lands; essentially non-productive.



## EXPLANATION OF SYMBOL.

## SIXO A

## EROSION

## LAND USE

## SLOPE

## INDEX

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES.  
TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE  
PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP  
WITH THE ARROW AS SHOWN ON THE DEGREE  
SCALE AT THE NORTH EDGE OF THE MAP.

### GEOGRAPHIC SYMBOLS

County \_\_\_\_\_

Township \_\_\_\_\_

Section \_\_\_\_\_

City \_\_\_\_\_

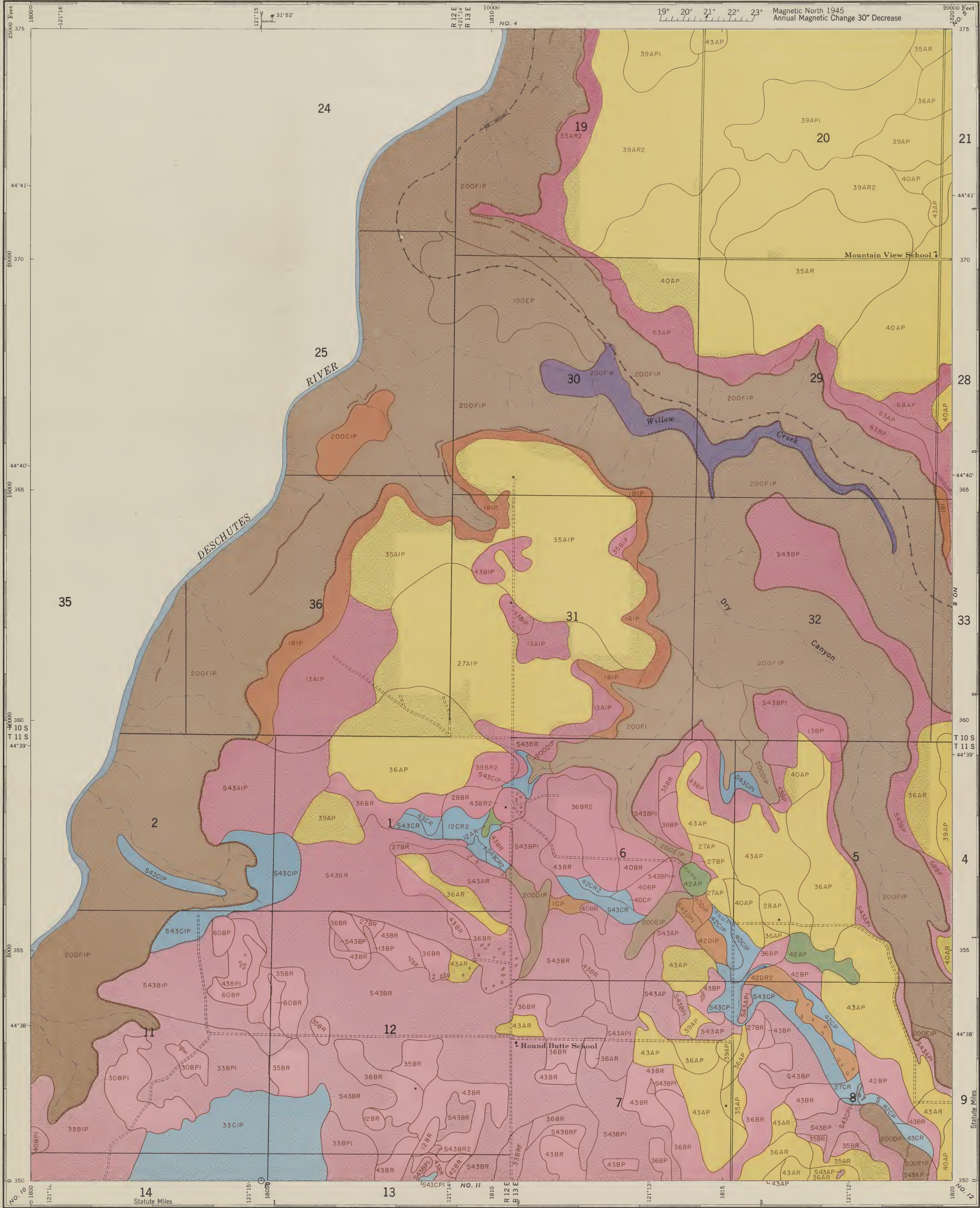
CONSERVATION SURVEY DATA  
(in bold)

Survey boundary \_\_\_\_\_

Start year: **1981** End year(s): **1982**

Especially \_\_\_\_\_







## Scale 1:15,840

### EXPLANATION OF SYMBOL

## SOILS

## SLOPE

This map illustrates the Willamette Valley region in Oregon, overlaid with a grid of 45 numbered squares. The map includes the following features:

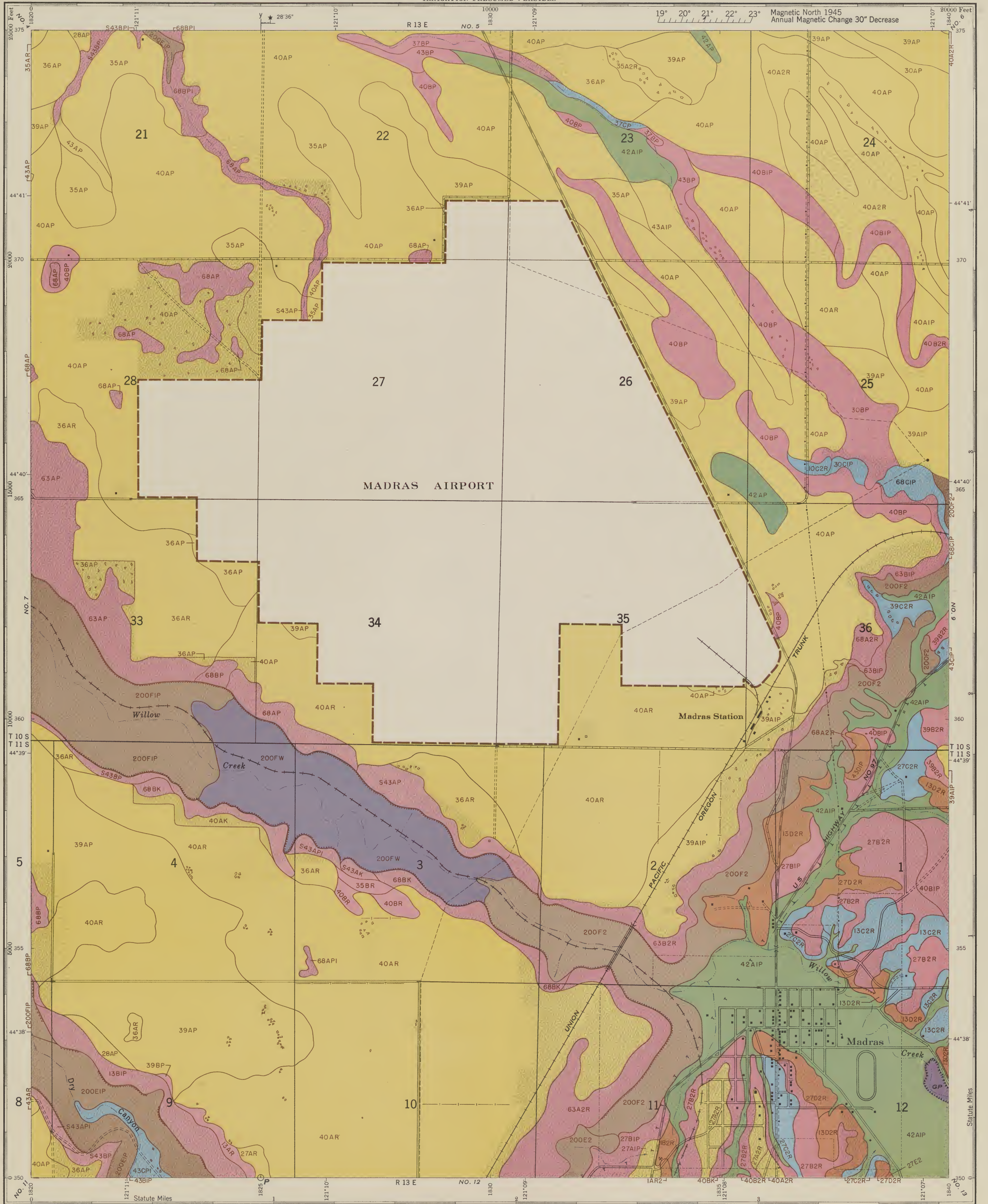
- Geographical Features:** Willamette River, Gateway, Madras, Metolius, Culver, Crook, Terrebonne, Redmond, Bend, McKenzie River, Deschutes River, Oregon Highway.
- Grid Coordinates:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45.
- Labels:** 10C, 3A, 3B, 21D, 21E, 33H, 33I, 45J.

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES.  
TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE  
PIVOT POINT 'P' ON THE SOUTH EDGE OF THE MAP  
WITH THE ARROW AS SHOWN ON THE DEGREE  
SCALE AT THE NORTH EDGE OF THE MAP.

## GEOGRAPHIC SYMBOLS

- County \_\_\_\_\_
- Township \_\_\_\_\_
- Section \_\_\_\_\_
- City \_\_\_\_\_
- CONSERVATION SURVEY DATA  
(in brown)
- Survey boundary \_\_\_\_\_
- Survey areas: Rock outcrops
- Elevation:





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.

II-Nearly level, moderately deep, permeable soils having minor limitations in use.

III-Moderately deep soils with stone, slope or texture limitations.

IV-Shallow, droughty or moderately sloping soils limited to pasture use.

VI-Sloping, very stony lands suited for range, having minor conservation needs.

VII-Steep, very stony lands suited for range, having major conservation needs.

VIII-Very steep, stony or droughty lands; essentially non-productive.



## Scale 1:15,8-40

### EXPLANATION OF SYMBOL

## SOILS

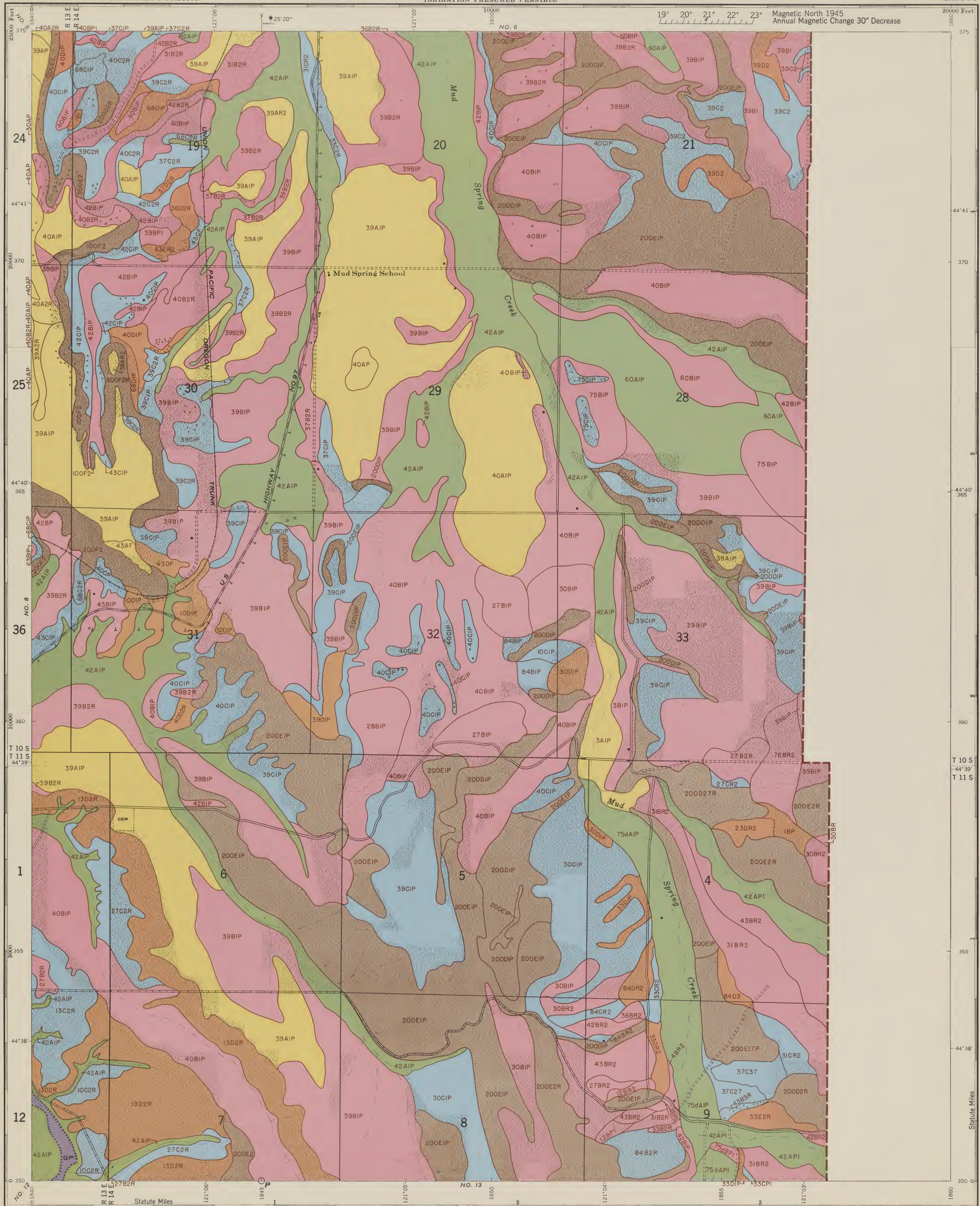
## ERUSTON

## LAND USE

## SLOPE

## GEOGRAPHIC SYMBOLS





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.

II-Nearly level, moderately deep, permeable soils having minor limitations in use.

III-Moderately deep soils with stone, slope or texture limitations.

IV-Shallow, droughty or moderately sloping soils limited to pasture use.

VI-Sloping, very stony lands suited for range, having minor conservation needs.

VII-Steep, very stony lands suited for range, having major conservation needs.

VIII-Very steep, stony or droughty lands, essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27-Silt (type, Madras sandy loam, C-Slope, 8 percent to 12 percent.  
28-Silt (medium, 25 percent to 75 percent lost, R-Wind erosion, 25 percent to 75 percent removed by wind)

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 - Deschutes sandy loam, shallow phase
- 3 - Deschutes sandy loam
- 43 - Silty sandy loam
- 13 - Deschutes heavy sand
- 4 - Deschutes sandy loam, deep phase
- 5 - Deschutes, silty, sandy loam
- 19 - Deschutes silty loam
- 583 - Ery silty sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 - Madras sandy loam, shallow phase
- 10C - Deschutes sandy loam, shallow phase
- 12 - Madras sandy loam, deep phase
- 12C - Deschutes sandy loam, deep phase
- 13 - Madras silty sandy loam
- 13C - Deschutes, silty, sandy loam
- 19 - Deschutes silty sandy loam
- 26 - Deschutes heavy sand
- 8C - Deschutes sandy loam
- 24 - Deschutes sandy loam

- 27 - Madras sandy loam
- 11C - Deschutes sandy loam
- 25 - Deschutes sandy loam
- 28 - Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16 - Madras sandy loam
- 47 - Deschutes heavy coarse sand
- 46 - Deschutes sandy loam
- 49 - Deschutes coarse sandy loam
- 65 - Deschutes heavy sand over riverbed

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 20 - Lamonts loam
- 31 - Lamonts sandy clay loam
- 32 - Lamonts stony sandy clay loam
- 33 - Lamonts stony loam
- 34 - Lamonts sandy clay loam, shallow phase
- 84 - Lamonts loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 30 - Aspen sandy loam
- 37 - Aspen gravelly loam
- 70 - Gem loam
- 36 - Aspen loam
- 63 - Aspen stony loam
- 71 - Gem clay loam
- 75 - Gem clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39 - Madras loam
- 40 - Madras sandy loam
- 48 - Madras sandy loam
- 55 - Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42 - Metolius sandy loam
- 60 - Metolius sandy loam
- 61 - Metolius fine sandy loam

- 62 - Metolius sandy loam
- 63 - Metolius sandy loam
- 64 - Lakelse sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51 - Dolan clay loam
- 52 - Dolan sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 - Redmond loam
- 75 - Redmond sandy loam
- 76 - Redmond sandy loam, deep phase
- 76 - Redmond clay loam

#### MISCELLANEOUS SOILS

- 100 - Rough stream bed
- 200 - Rough stream bed
- HW - Riverbank
- 61 - Volcanic ash
- 1 - Scabland

### EROSION

#### SHEET EROSION

- 1 - Less than 15 percent of surface soil lost
- 2 - 15 percent to 25 percent of surface soil lost
- 3 - 25 percent to 50 percent of surface soil lost
- 4 - 50 percent to 75 percent of surface soil lost
- 5 - 75 percent to 100 percent of surface soil lost

#### GULLY EROSION

- 7 - Occasional, shallow gullies
- 8 - Occasional gullies, unconsolidated, by farm machinery
- 9 - Shallow gullies, less than 100 feet apart laterally, on more than 3 per acre
- 10 - Unconsolidated gullies, less than 100 feet apart laterally, on more than 3 per acre

#### WIND EROSION

- P - Up to 25 percent of surface soil removed
- R - 25 percent to 75 percent of surface soil removed
- S - 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F - Accumulations 0 inches to 6 inches deep, level
- H - Accumulations 6 inches to 12 inches deep, level
- K - Accumulations 12 inches to 18 inches deep, hummocky
- L - Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W - Normal erosion
- O - No accelerated erosion
- 9 - Undifferentiated erosion (farmstead, urban areas)

### LAND USE

Reproduced in gray

Outwash fan, gravel and pebbles, such as grain, row crops, silage, clover and grasses

Grass and land formerly cultivated but now abandoned or used for pastures, cropland, orchards, or forests

Forest land, annual and perennial grasses, or crops

Woodland, Juniper or Ponderosa pine

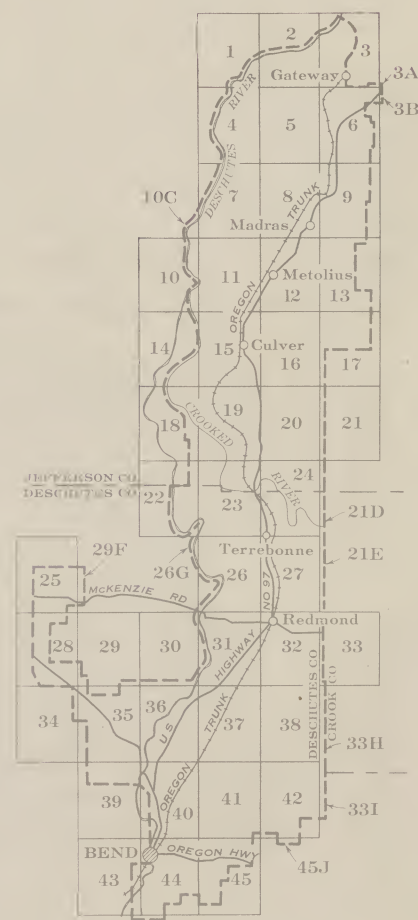
Barren land

Farmstead and urban area

### SLOPE

Dominant Percent	Dominant Percent
A - 0 to 3	D - 13 to 20
B - 4 to 7	E - 21 to 35
C - 8 to 12	F - 36 and over

## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 8000-foot grid based on U.S. (NAD 28) system (North Zone). All plane coordinates with last three digits of grid number printed. Polyconic projection indicated by marginal ticks.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads - Hard-surfaced
- Semi-hard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads - Single track

### WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Gravel crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- Shed

### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Miner, quarry

### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stony area
- Escarpment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Springs
- Marsh
- Well
- Sinks



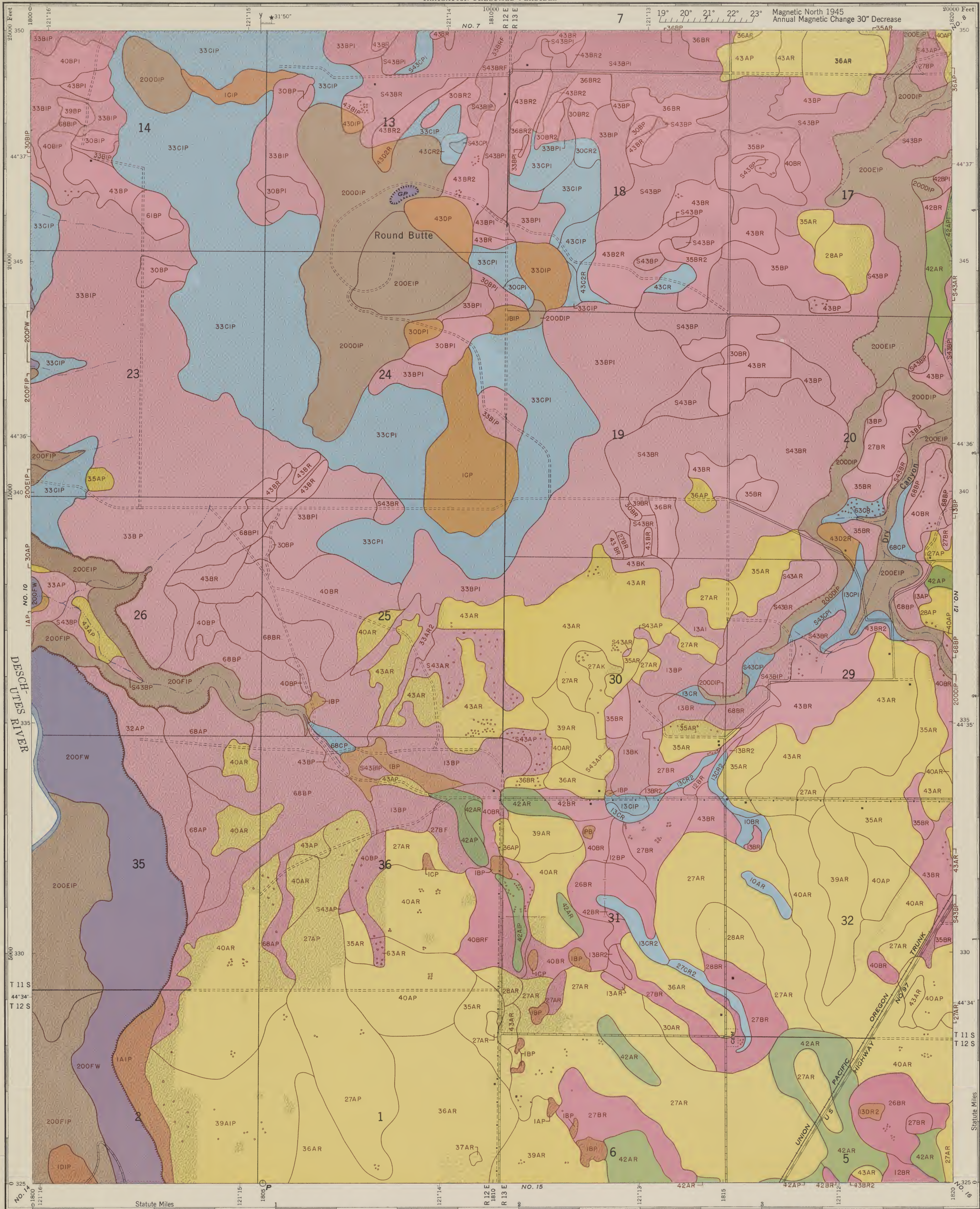


VIII-Very steep, stony or droughty lands essentially non-productive:









SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27-Soil type, Madras sandy loam. C-Slope, 8 percent to 12 percent.  
2-Sheet erosion, 25 percent to 75 percent lost. R-Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL.

- 2- Deschutes sandy loam, shallow phase.
- 3- Deschutes sandy loam.
- 43- Era sandy loam.
- 13- Deschutes loamy sand.
- 4- Deschutes sandy loam, deep phase.
- 5- Deschutes stony sandy loam.
- 19- Deschutes stony loam.
- S43- Era stony sandy loam.

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL.

- 10- Madras sandy loam, shallow phase.
- 10c- Deschutes sandy loam, shallow phase.
- 12- Madras sandy loam, deep phase.
- 12c- Deschutes sandy loam, deep phase.
- 13- Madras stony sandy loam.
- 13c- Deschutes stony sandy loam.
- 90- Deschutes stony sandy loam.
- 26- Deschutes loamy sand.
- 9c- Deschutes loamy sand.
- 24- Deschutes loamy sand.

- 127- Madras sandy loam.
- 11c- Deschutes sandy loam.
- 25- Deschutes sandy loam.
- 28- Madras loam.

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS.

- 16- Metolius sandy loam.
- 47- Deschutes loamy coarse sand.
- 46- Deschutes loamy sand.
- 49- Deschutes coarse sandy loam.
- 65- Deschutes loamy sand over riverwash.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS.

- 30- Lamonia loam.
- 31- Lamonia sandy clay loam.
- 32- Lamonia stony sandy clay loam.
- 33- Lamonia stony loam.
- 34- Lamonia sandy clay loam, shallow phase.
- 34- Lamonia loam, shallow phase.

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS.

- 35- Agency sandy loam.
- 37- Agency gravelly loam.
- 70- Gem loam.
- 36- Agency loam.
- 63- Agency stony loam.
- 71- Gem clay loam.
- 73- Gem clay loam, shallow phase.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN.

- 39- Madras loam.
- 40- Madras sandy loam.
- 68- Madras sandy loam.
- 65- Madras clay loam.

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS.

- 42- Metolius sandy loam.
- 40- Metolius sandy loam.
- 41- Metolius fine sandy loam.

- 62- Metolius sandy loam.
- 92- Metolius loamy sand.
- 6X- Laidlaw sandy loam.

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS.

- 51- Odin clay loam.
- 52- Odin sandy loam.

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS.

- 74- Redmond loam.
- 75- Redmond sandy loam.
- 75d- Redmond sandy loam, deep phase.
- 76- Redmond clay loam.

#### MISCELLANEOUS SOILS.

- 100- Rough broken land.
- 200- Rough stony land.
- RW- Riverwash.
- 91- Volcanic ash.
- 1- Scabland.

### EROSION

#### SHEET EROSION.

- 1- Less than 25 percent of the surface soil lost.
- 2- 25 percent to 75 percent of the surface soil lost.
- 3- 75 percent to 100 percent of the surface soil lost.
- 4- 25 percent to 50 percent of the B horizon lost.

#### GULLY EROSION.

- 7- Occasional shallow gullies.
- 7a- Occasional gullies uncrossable by farm machinery.
- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre.
- 8a- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre.

#### WIND EROSION.

- P- Up to 25 percent of surface soil removed.
- R- 25 percent to 75 percent of surface soil removed.
- S- 75 percent to 100 percent of surface soil removed.

#### WIND DEPOSITS.

- F- Accumulations, 0 inches to 6 inches deep, level.
- H- Accumulations, 6 inches to 12 inches deep, level.
- K- Accumulations 6 inches to 12 inches deep, hummocky.
- L- Line accumulations less than 10 feet wide, include within boundaries.

#### MISCELLANEOUS.

- W- Normal erosion.
- O- No accelerated erosion.
- 9- Undifferentiated erosion (nonsteady, urban areas).

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and prairie.

Pasture land, land formerly cultivated for row crops, now in annual grasses, coastal shrub grasses, or brush.

Rangeland, Annual or perennial grasses or sagebrush.

Woodland, Juniper or Ponderosa pine.

Idle land.

Farmstead and urban area.

### SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

Roads - Hard-surfaced	
Semihard-surfaced	
Dirt (good motor)	
Dirt (poor motor or private)	
Bridge	
Culvert	
Ford	
Railroads - Single track	

#### WORKS AND STRUCTURES

Railroads - Abandoned	
Bridges	
Grate crossing	
Railroad under	
Railroad over	
Tunnel	
Buildings in general	
Church	
School	

#### WORKS AND STRUCTURES

Tanks	
Power line	
Telephone line	
Pipe line	
Cemeteries	
Dams	
Gravel pit	
Mine, quarry	

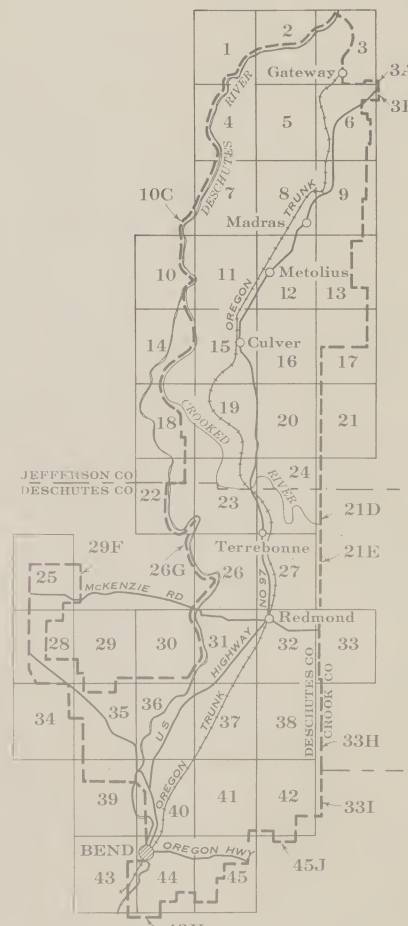
#### BOUNDARIES, MARKS, AND MONUMENTS

County	
Township	
Section	
City	
Conservation Survey Data (in brown)	
Survey boundary	
Stony areas	
Rock outcrops	
Excavation	

#### DRAINAGE (in blue)

Perennial streams	
Intermittent streams	
Creeks or ditches	
Canal tunnel	
Water tanks	
Well	
Ponds, reservoirs	
Springs	
Sinks	
Marsh	

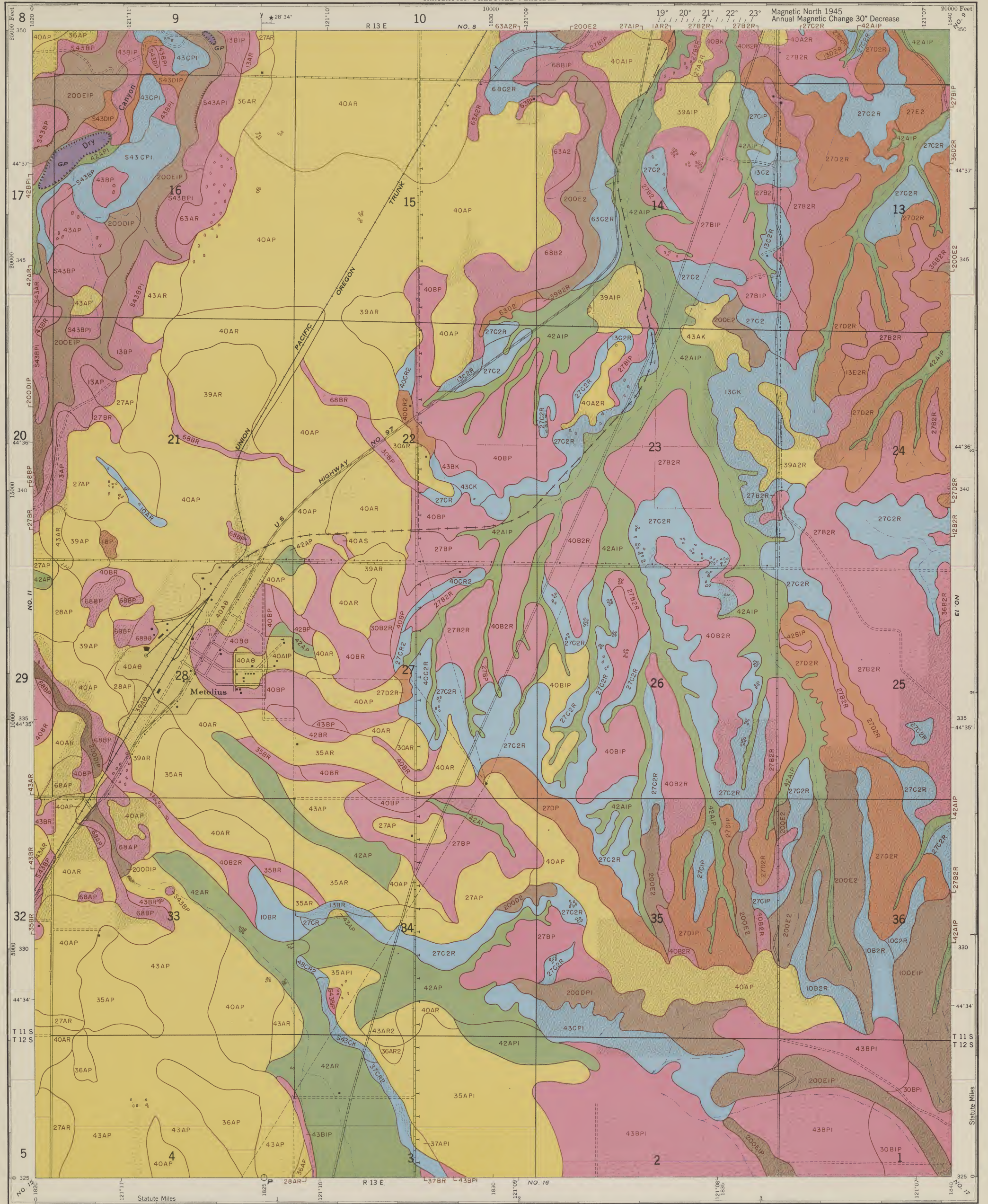
## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. Section grid based upon Oregon system (North Zone). All place coordinates with last three digits of grid number omitted. Poly-omic projection indicated by marginal ticks.





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

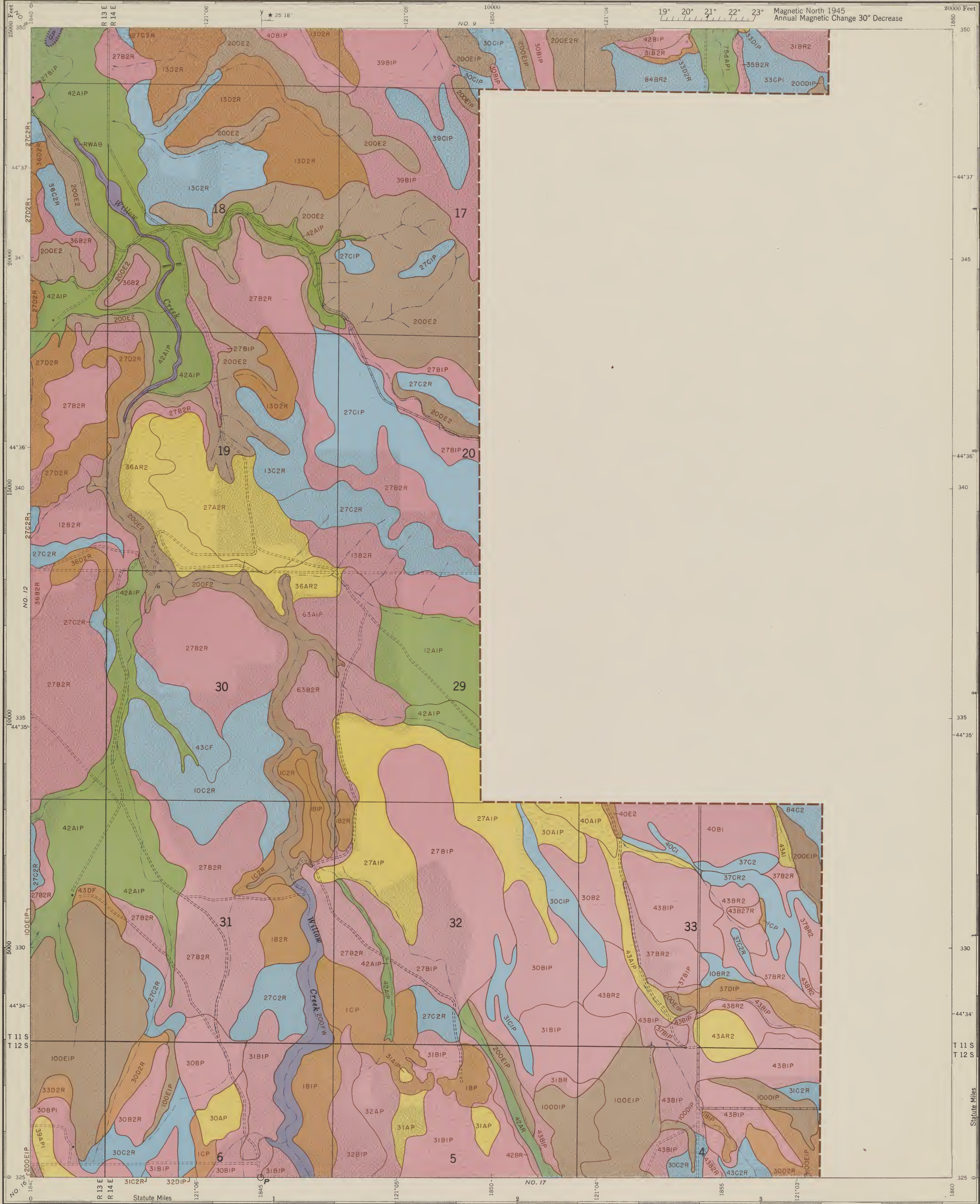
NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |  |   |  |   |
|---|--|---|--|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | V-Sloping, very stony lands suited for range, having minor conservation needs. | VI-Sloping, very stony lands suited for range, having major conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|--|---|--|---|









SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|









SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|



## Scale 1:15,840

EXPLANATION OF SYMBOL

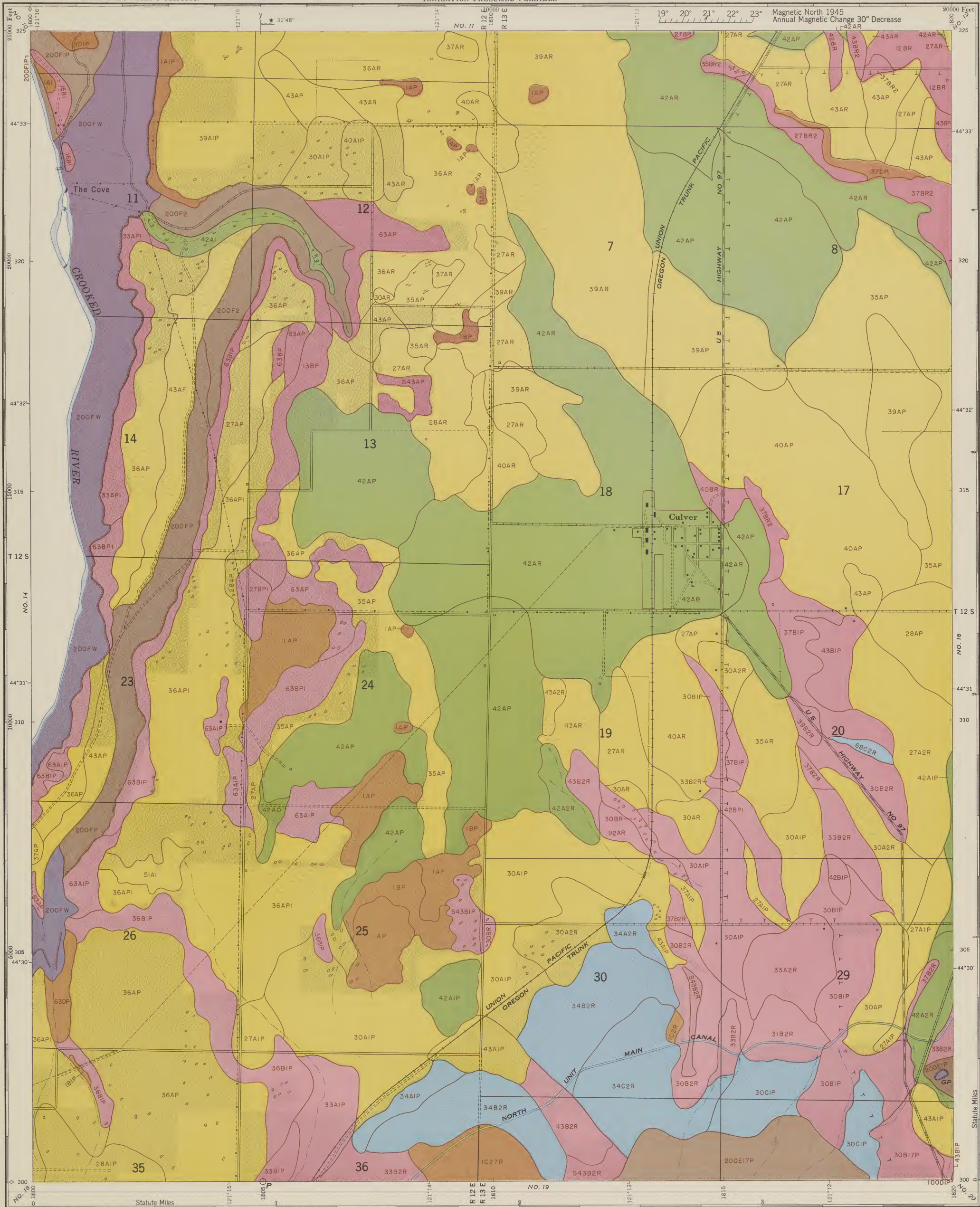
## SOILS

## SLOPE

### GEOGRAPHIC SYMBOLS

- County \_\_\_\_\_
- Township \_\_\_\_\_
- Section \_\_\_\_\_
- City \_\_\_\_\_
- CONSERVATION SURVEY DATA  
(in brown)
- Survey boundary \_\_\_\_\_
- Study area: 785 Rock outcrops: 122
- Enlargement: \_\_\_\_\_





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

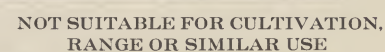
NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|









VIII-Very steep, stony or droughty lands;  
essentially non-productive.



## Scale 1:15,840

## EXPLANATION OF SYMBOL

## SOILS

## EROSION

## LAND USE

## SLOPE

## INDEX

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES  
TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE  
PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP  
WITH THE ARROW AS SHOWN ON THE DEGREE  
SCALE AT THE NORTH EDGE OF THE MAP

### GEOGRAPHIC SYMBOLS

County \_\_\_\_\_

Township \_\_\_\_\_

Section \_\_\_\_\_

City \_\_\_\_\_

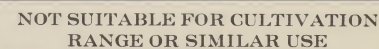
CONSERVATION SURVEY DATA  
(in brown)

Survey boundary \_\_\_\_\_

Story areas: PS Hickoryknaps

Ecosystem(s) \_\_\_\_\_





VIII-Very steep, stony or droughty lands essentially non-productive.



DESCHUTES IRRIGATION PROJECT  
Scale 1:15,810

LEGEND

EXPLANATION OF SYMBOL

27C2R  
27-Soil type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
2-Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

SOILS

LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 - Deschutes sandy loam, shallow phase
- 3 - Deschutes sandy loam
- 43 - Era sandy loam
- 13 - Deschutes loamy sand
- 4 - Deschutes sandy loam, deep phase
- 5 - Deschutes stony sandy loam
- 19 - Deschutes stony loam
- S43 - Era stony sandy loam

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 - Madras sandy loam, shallow phase
- 10c - Deschutes sandy loam, shallow phase
- 12 - Madras sandy loam, deep phase
- 12c - Deschutes sandy loam, deep phase
- 13 - Madras stony sandy loam
- 13c - Deschutes stony sandy loam
- 90 - Deschutes stony sandy loam
- 26 - Deschutes loamy sand
- 26c - Deschutes loamy sand
- 24 - Deschutes loamy sand

- 27 - Madras sandy loam
- 11c - Deschutes sandy loam
- 25 - Deschutes sandy loam
- 28 - Madras loam

LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS

- 16 - Metolius sandy loam
- 47 - Deschutes heavy coarse sand
- 46 - Deschutes loamy sand
- 49 - Deschutes coarse sandy loam
- 65 - Deschutes loamy sand over riverwash

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30 - Lamonta loam
- 31 - Lamonta sandy clay loam
- 32 - Lamonta stony sandy clay loam
- 33 - Lamonta stony loam
- 34 - Lamonta stony clay loam, shallow phase
- 84 - Lamonta loam, shallow phase

LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35 - Agency sandy loam
- 37 - Agency gravelly loam
- 70 - Gem loam
- 36 - Agency loam
- 63 - Agency stony loam
- 71 - Gem clay loam
- 73 - Gem clay loam, shallow phase

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARD PAN

- 39 - Madras loam
- 40 - Madras sandy loam
- 68 - Madras stony loam
- 85 - Madras clay loam

LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42 - Metolius sandy loam
- 60 - Metolius sandy loam
- 61 - Metolius fine sandy loam

- 62 - Metolius sandy loam
- 92 - Metolius loamy sand
- 6X - Laidlaw sandy loam

POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51 - Odin clay loam
- 52 - Odin sandy loam

LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 - Redmond loam
- 75 - Redmond sandy loam
- 75d - Redmond sandy loam, deep phase
- 76 - Redmond clay loam

MISCELLANEOUS SOILS

- 100 - Rough broken land
- 200 - Rough stony land
- RW - Riverwash
- 91 - Volcanic ash
- 1 - Scrubland

EROSION

SHEET EROSION

- 1 - Less than 25 percent of the surface soil lost
- 2 - 25 percent to 75 percent of the surface soil lost
- 3 - 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 - 25 percent to 50 percent of the B horizon lost

GULLY EROSION

- 2 - Occasional shallow gullies
- 2 - Occasional gullies uncrossable by farm machinery
- 3 - Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 3 - Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

WIND EROSION

- P - Up to 25 percent of surface soil removed
- R - 25 percent to 75 percent of surface soil removed
- S - 75 percent to 100 percent of surface soil removed

WIND DEPOSITS

- F - Accumulations 0 inches to 6 inches deep, level
- H - Accumulations 6 inches to 12 inches deep, level
- K - Accumulations 6 inches to 12 inches deep, hummocky
- — — — — Line accumulations too narrow to include within boundaries

MISCELLANEOUS

- W - Normal erosion
- O - Non-accelerated erosion
- B - Undifferentiated erosion (farmsteads, urban areas)

LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Pasture land, land formerly cultivated but now abandoned, in annual grasses, seeded wheat, grasses, or browse

Rangeland, Annual or perennial grasses or sagebrush

Woodland, Juniper or Ponderosa pine

Idle land

Farmstead and urban area

SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

GEOGRAPHIC SYMBOLS

WORKS AND STRUCTURES	
Roads - Hard-surfaced	=====
Semi-hard-surfaced	=====
Dirt (good motor)	=====
Dirt (poor motor or private)	=====
Bridge	=====
Culvert	=====
Ford	=====
Railroads - Single track	=====

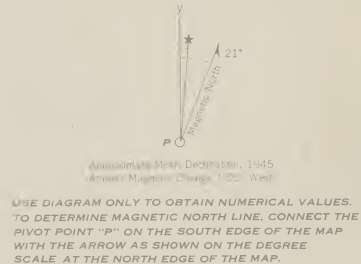
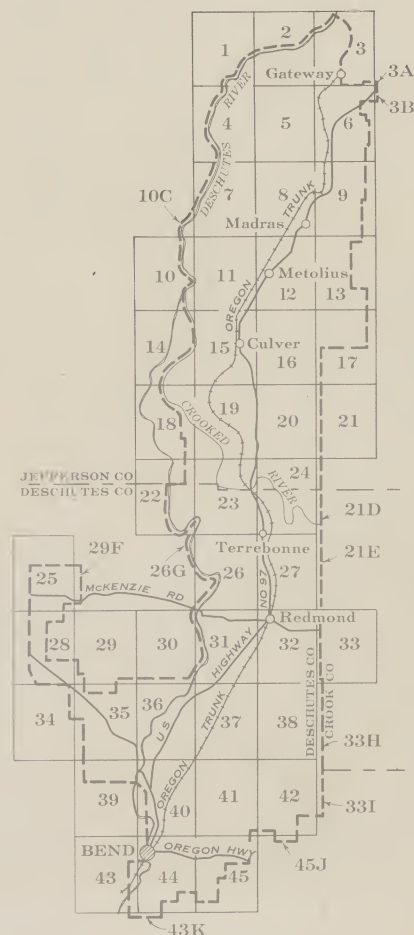
WORKS AND STRUCTURES	
Railroads - Abandoned	=====
Bridge	=====
Grade crossing	=====
Railroad under	=====
Railroad over	=====
Tunnel	=====
Buildings in general	=====
Church	=====
School	=====

WORKS AND STRUCTURES	
Tanks	=====
Power line	=====
Telephone line	=====
Pipe line	=====
Cemeteries	=====
Dams	=====
Gravel pit	=====
Mine, quarry	=====

BOUNDARIES, MARKS, AND MONUMENTS	
County	=====
Township	=====
Section	=====
City	=====
CONSERVATION SURVEY DATA (in brown)	
Survey boundary	=====
Stony areas	=====
Rock outcrops	=====
Easement	=====

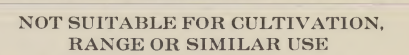
DRAINAGE (in blue)	
Perennial streams	=====
Intermittent streams	=====
Canals or ditches	=====
Canal tunnel	=====
Water tanks	=====
Wells	=====
Ponds, reservoirs	=====
Springs	=====
Sinks	=====
Marsh	=====

INDEX



Base from U.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 5000 foot grid based upon Oregon system (North Zone). All elevations in feet unless otherwise indicated. All elevations with last three digits of grid numbers. All elevations in feet unless otherwise indicated. All elevations in feet unless otherwise indicated.





VIII-Very steep, stony or droughty lands;  
essentially non-productive.









VIII-Very steep, stony or droughty lands;  
essentially non-productive.



## Scale 1:15,840

### EXPLANATION OF SYMBOL

## SOILS

## SLOPE

### GEOGRAPHIC SYMBOLS

County \_\_\_\_\_



Township \_\_\_\_\_


Section \_\_\_\_\_

City \_\_\_\_\_

CONSERVATION SURVEY DATA  
(in brown)

Survey boundary \_\_\_\_\_

Slary argus  Rock pitstop 

(Eichornia) 





SOIL CONSERVATION SERVICE WASHINGTON, D. C. APRIL 1966



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27-28R  
27-Silt type, Malpas sandy loam C-Slips, 8 percent to 12 percent  
28-Silt type, 25 percent to 75 percent loam, R-Wind erosion, 25 percent to 75 percent removed by wind

## SOILS

### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2-Deschutes sandy loam, shallow phase
- 3-Deschutes sandy loam
- 43-Deschutes loam
- 13-Deschutes loamy sand
- 4-Deschutes sandy loam, deep phase
- 5-Deschutes sandy loam, deep phase
- 19-Deschutes loam
- 543-Deschutes loam

### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10-Malpas sandy loam, shallow phase
- 10C-Deschutes sandy loam, shallow phase
- 12-Malpas sandy loam, deep phase
- 12C-Deschutes sandy loam, deep phase
- 13-Malpas sandy loam
- 13C-Deschutes sandy loam
- 19-Deschutes sandy loam
- 26-Deschutes sandy loam
- 34-Deschutes loam
- 34-Deschutes loam

### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 35-Agency sandy loam
- 37-Agency sandy loam
- 70-Deschutes loam
- 36-Agency loam
- 63-Agency sandy loam
- 71-Deschutes loam
- 73-Deschutes loam, shallow phase

### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16-Malpas sandy loam
- 47-Deschutes loam, shallow phase
- 48-Deschutes loam, shallow phase
- 49-Deschutes loam, shallow phase
- 55-Deschutes loam, shallow phase

### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30-Lamonte loam
- 31-Lamonte sandy loam
- 32-Lamonte sandy loam
- 33-Lamonte sandy loam
- 34-Lamonte sandy loam, shallow phase
- 34-Lamonte loam, shallow phase

### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 35-Agency sandy loam
- 37-Agency sandy loam
- 70-Deschutes loam
- 36-Agency loam
- 63-Agency sandy loam
- 71-Deschutes loam
- 73-Deschutes loam, shallow phase

### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDEN

- 39-Malpas loam
- 40-Malpas sandy loam
- 41-Malpas sandy loam
- 42-Malpas sandy loam

### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42-Malpas sandy loam
- 50-Malpas sandy loam
- 61-Malpas sandy loam

### POORLY DRAINAGE, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51-Deschutes loam
- 52-Deschutes loam
- 53-Deschutes loam
- 54-Deschutes loam
- 55-Deschutes loam

### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIALS

- 14-Deschutes loam
- 75-Deschutes sandy loam
- 76-Deschutes sandy loam
- 77-Deschutes sandy loam

### MISCELLANEOUS SOILS

- 15-Deschutes loam
- 16-Deschutes loam
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- 76-Deschutes loam
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- 84-Deschutes loam
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- 86-Deschutes loam
- 87-Deschutes loam
- 88-Deschutes loam
- 89-Deschutes loam
- 90-Deschutes loam
- 91-Deschutes loam
- 92-Deschutes loam
- 93-Deschutes loam
- 94-Deschutes loam
- 95-Deschutes loam
- 96-Deschutes loam
- 97-Deschutes loam
- 98-Deschutes loam
- 99-Deschutes loam

## EROSION

### SHEET EROSION

- 1-Less than 25 percent of the surface soil lost
- 2-25 percent to 75 percent of the surface soil lost
- 3-75 percent to 100 percent of the surface soil lost
- 4-25 percent to 50 percent of the B horizon lost

### GULLY EROSION

- 7-Discontinuous shallow gullies
- 8-Discontinuous gullies intersected by farm machinery
- 9-Discontinuous gullies less than 100 feet wide, frequently or rarely filled with water
- 10-Discontinuous gullies less than 100 feet wide, rarely or never filled with water

### WIND EROSION

- F-Up to 25 percent of surface soil removed
- R-25 percent to 75 percent of surface soil removed
- S-75 percent to 100 percent of surface soil removed

### WIND DEPOSITS

- F-Accumulations 0 inches to 6 inches deep, level
- H-Accumulations 6 inches to 12 inches deep, level
- K-Accumulations 6 inches to 12 inches deep, hummocky
- L-Accumulations 6 inches to 12 inches deep, hummocky with boundaries

### MISCELLANEOUS

- W-Normal erosion
- O-No accelerated erosion
- U-Unaccelerated erosion (farmstead, urban, etc.)

## LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Pasture land, land formerly cultivated but now abandoned, in annual or perennial crops, or in grasses or shrubs

Range land, annual or perennial grasses or shrubs

Woodland, timber or non-timber land

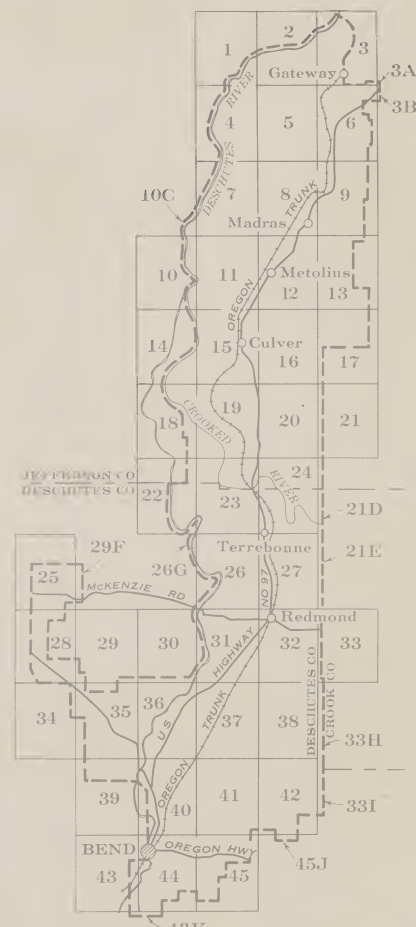
Idle land

Barren or desert land

## SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 34
C	8 to 12	F	35 and over

## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE "PIVOT POINT" "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Map from U.S.G.S. Geologic Survey, Revised 1960, and conservative survey compiled by Soil Conservation Service from aerial photographs. Land use information based on 1960 aerial photographs. All other information is from 1960. All other information is from 1960. All other information is from 1960.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads- Hard surfaced
- Semi-hard surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Canal
- Ford
- Railroads- Single track

### WORKS AND STRUCTURES

- Railroads- At-grade
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tank
- Power line
- Telephone line
- Pipe line
- Cemetery
- Dam
- Gravel pit
- Mine quarry

### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Survey boundary
- Stone mark
- Rock boundary
- Enclosure

### DRAINAGE

- Perennial stream
- Intermittent stream
- Canal or ditch
- Canal unit
- Water tank
- Pond, reservoir
- Spring
- Sink
- Mudflat





VIII-Very steep, stony or droughty lands; essentially non-productive.









SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

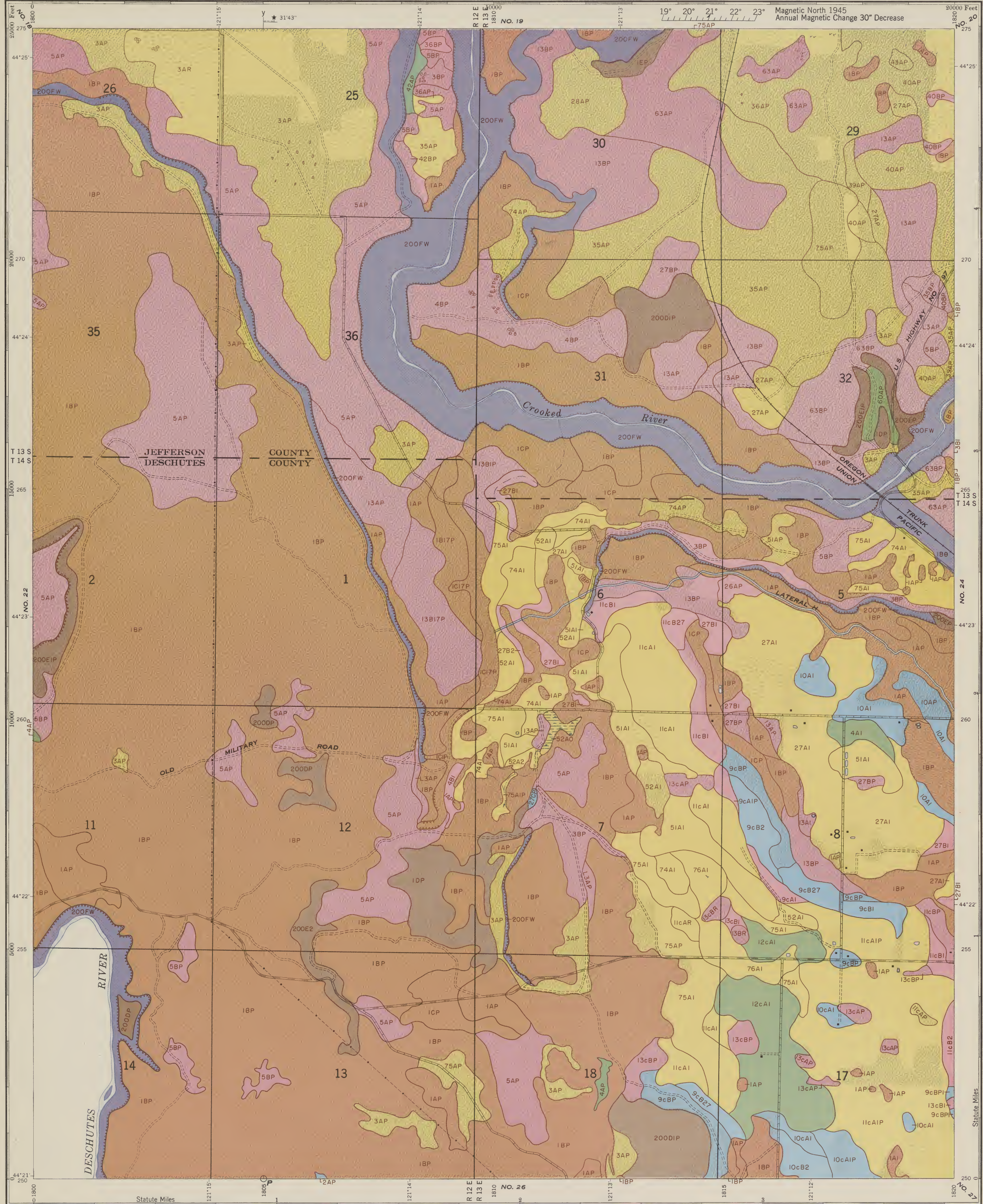
NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.	II-Nearly level, moderately deep, permeable soils having minor limitations in use.	III-Moderately deep soils with stone, slope or texture limitations.	IV-Shallow, droughty or moderately sloping soils limited to pasture use.	VI-Sloping, very stony lands suited for range, having minor conservation needs.	VII-Sloping, very stony lands suited for range, having major conservation needs.	VIII-Very steep, stony or droughty lands, essentially non-productive.
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SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|



DESCHUTES IRRIGATION PROJECT  
Scale 1:15,840

LEGEND

EXPLANATION OF SYMBOL

TOP

1 - 100% topsoil removed (100% removed)  
2 - 75% topsoil removed (75% removed)  
3 - 50% topsoil removed (50% removed)  
4 - 25% topsoil removed (25% removed)  
5 - 10% topsoil removed (10% removed)  
6 - 5% topsoil removed (5% removed)  
7 - 2% topsoil removed (2% removed)  
8 - 1% topsoil removed (1% removed)  
9 - 0% topsoil removed (0% removed)

SOILS

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 - Madras sandy loam, shallow phase
- 3 - Deschutes sandy loam
- 43 - Eng sandy loam
- 44 - Deschutes loamy sand
- 4 - Deschutes sandy loam, deep phase
- 5 - Deschutes sandy loam, deep phase
- 19 - Deschutes sandy loam
- 543 - Eng sandy loam

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 - Madras sandy loam, shallow phase
- 10C - Deschutes sandy loam, shallow phase
- 12 - Madras sandy loam, deep phase
- 12C - Deschutes sandy loam, deep phase
- 13 - Madras stony sandy loam
- 13C - Deschutes stony sandy loam
- 90 - Deschutes stony sandy loam
- 26 - Deschutes loamy sand
- 9C - Deschutes loamy sand
- 24 - Deschutes loamy sand

LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 27 - Madras sandy loam
- 10C - Deschutes sandy loam
- 20 - Deschutes sandy loam
- 26 - Madras loam
- 15 - Madras sandy loam
- 47 - Deschutes loamy coarse sand
- 45 - Deschutes loamy sand
- 49 - Deschutes coarse sandy loam
- 65 - Deschutes loamy sand over riverwash

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30 - Lamonta loam
- 31 - Lamonta sandy clay loam
- 32 - Lamonta stony sandy clay loam
- 33 - Lamonta stony loam
- 34 - Lamonta sandy clay loam, shallow phase
- 84 - Lamonta loam, shallow phase

LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35 - Madras sandy loam
- 37 - Madras gravelly loam
- 70 - Eng loam
- 36 - Madras loam
- 68 - Madras stony loam
- 71 - Eng clay loam
- 73 - Eng clay loam, shallow phase

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDEN

- 39 - Madras loam
- 40 - Madras sandy loam
- 48 - Madras stony loam
- 49 - Madras clay loam

LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42 - Metolius sandy loam
- 60 - Metolius sandy loam
- 61 - Metolius fine sandy loam

MODERATELY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51 - Ode clay loam
- 52 - Ode sandy loam
- 53 - Madras sandy loam
- 54 - Madras sandy loam
- 55 - Laylaw sandy loam

LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS, MODERATELY CONSOLIDATED MATERIALS

- 74 - Redmond loam
- 75 - Redmond sandy loam
- 76 - Redmond sandy loam, deep phase
- 76 - Redmond clay loam

MISCELLANEOUS SOILS

- 100 - Rough broken land
- 200 - Rough stony land
- RW - Riverwash
- 91 - Volcanic ash
- 1 - Scabland

EROSION

SHEET EROSION

- 1 - Less than 25 percent of the surface soil lost
- 2 - 25 percent to 75 percent of the surface soil lost
- 3 - 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 - 25 percent to 50 percent of the B horizon lost

GULLY EROSION

- 7 - Occasional shallow gullies
- 7 - Occasional gullies uncrossable by farm machinery
- 8 - Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 8 - Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

WIND EROSION

- P - Up to 25 percent of surface soil removed
- R - 25 percent to 75 percent of surface soil removed
- S - 75 percent to 100 percent of surface soil removed

WIND DEPOSITS

- F - Accumulations 0 inches to 6 inches deep, level
- H - Accumulations 6 inches to 12 inches deep, level
- K - Accumulations 6 inches to 12 inches deep, hummocky
- Unit accumulations too numerous to include with in boundary

MISCELLANEOUS

- W - Normal erosion
- O - No accelerated erosion
- E - Undifferentiated erosion (hammocks, sandbars)

LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land, Land formerly cultivated but now abandoned in annual grasses, crested wheat grasses, or browse

Range land, Annual or perennial grasses or sagebrush

Woodland, Juniper or Pinus ponderosa pine

Idle land

Farmstead and urban areas

SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

GEOGRAPHIC SYMBOLS

WORKS AND STRUCTURES

- Roads - Hard-surfaced
- Semi-hard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads - Single track

WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings (in general)
- Chowder
- School

WORKS AND STRUCTURES

- Tank
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine, quarry

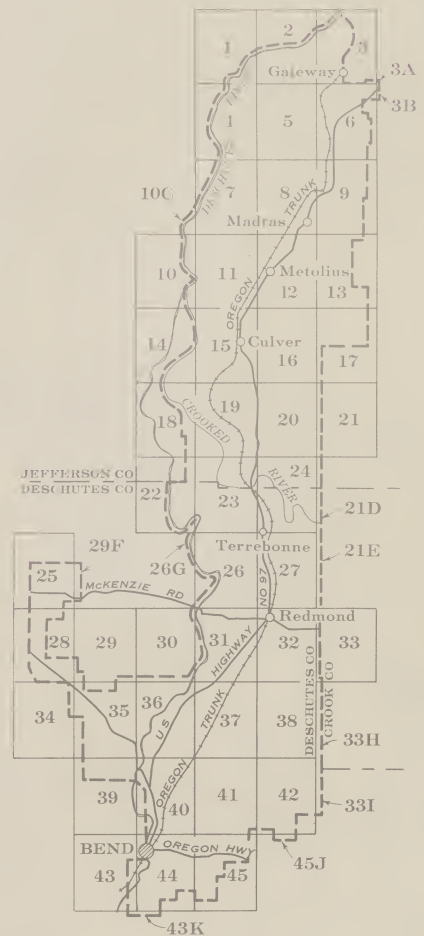
BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Elevation

DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Sinks
- Marsh

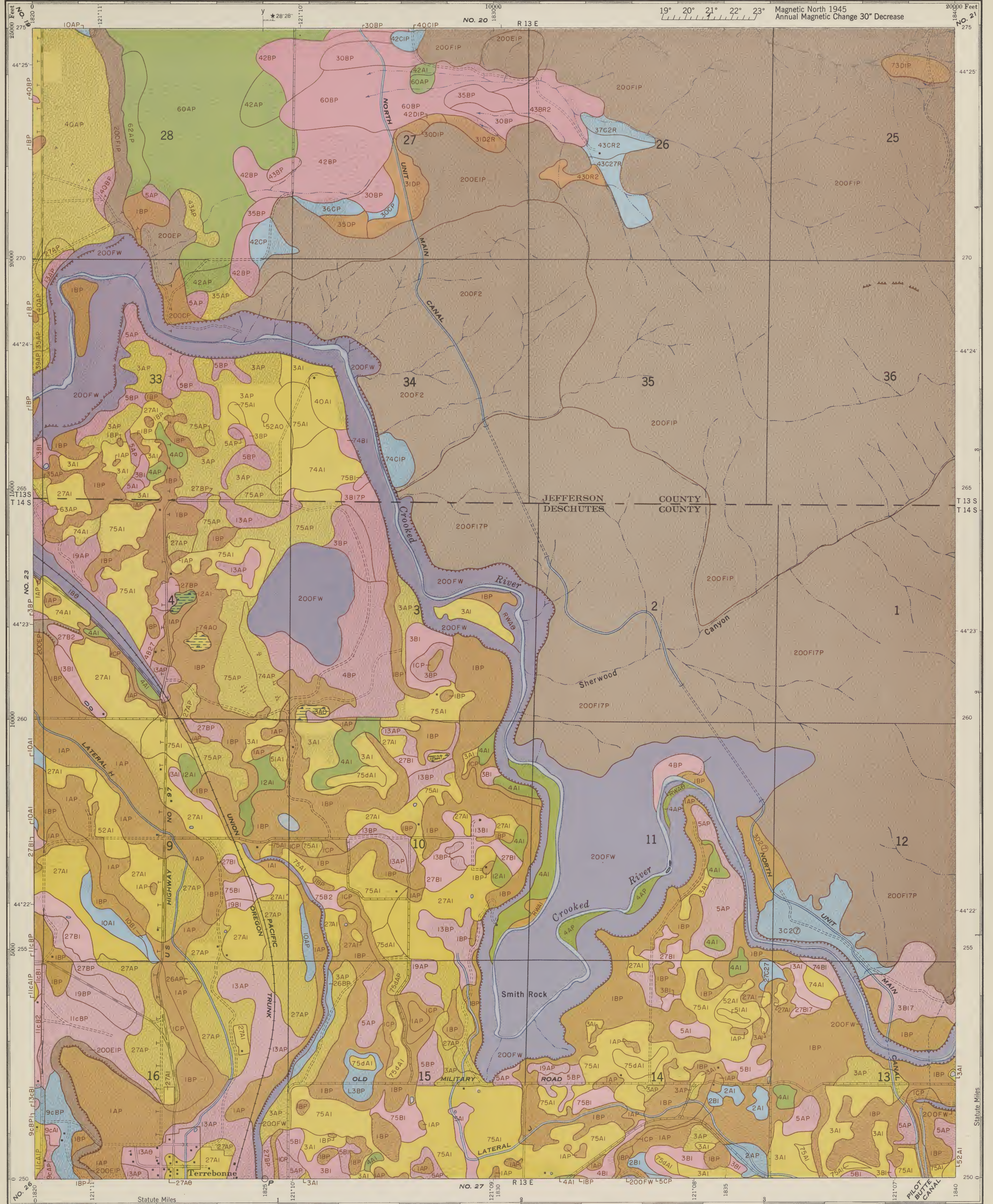
INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangle. Revisions to base and collection survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. UTM grid and UTM zone system (North Zone) of grid coordinates with last three digits of grid numbers. UTM zone projection indicated by marginal ticks.





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Sloping, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands; essentially non-productive. |
|---|--|---|--|---|--|---|

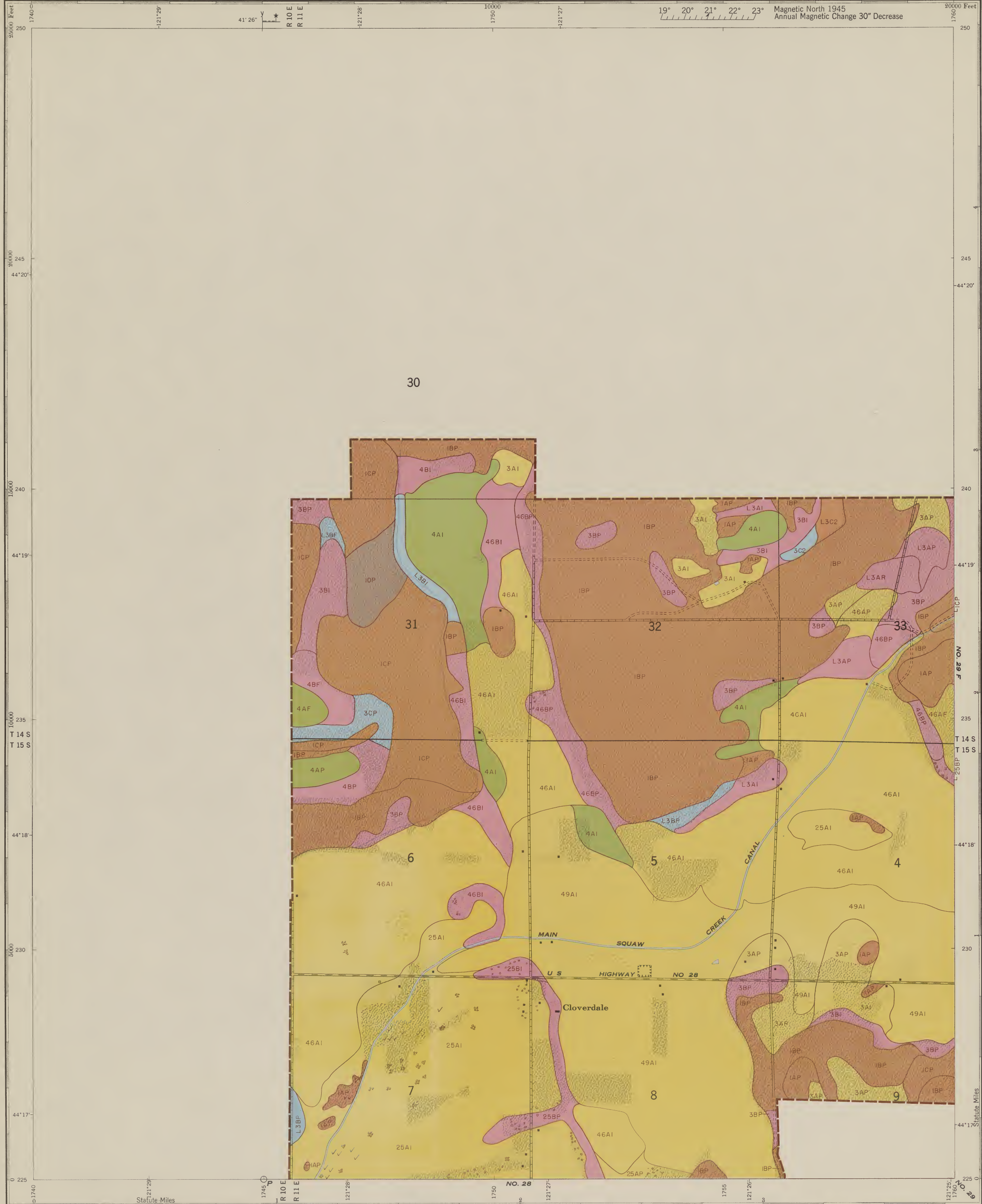


## Scale 1:15,840

### EXPLANATION OF SYMBOL

SOILS





SUITABLE FOR CULTIVATION		SUITABLE FOR OCCASIONAL CULTIVATION		NOT SUITABLE FOR CULTIVATION		NOT SUITABLE FOR CULTIVATION, RANGE OR SIMILAR USE	
I-Nearly level, deep, permeable soils having no special limitations in use.	II-Nearly level, moderately deep, permeable soils having minor limitations in use.	III-Moderately deep soils with stone, slope or texture limitations.	IV-Shallow, droughty or moderately sloping soils limited to pasture use.	VI-Sloping, very stony lands suited for range, having minor conservation needs.	VII-Steep, very stony lands suited for range, having major conservation needs.	VIII-Very steep, stony or droughty lands; essentially non-productive.	



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27-500 type, Madras sandy loam. C Slope, 8 percent to 12 percent  
2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 - Deschutes sandy loam, shallow phase
- 3 - Deschutes sandy loam
- 43 - Era sandy loam
- L3 - Deschutes loamy sand
- 4 - Deschutes sandy loam, deep phase
- 5 - Deschutes stony sandy loam
- 19 - Deschutes stony loam
- S43 - Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 - Madras sandy loam, shallow phase
- 10c - Deschutes sandy loam, shallow phase
- 12 - Madras sandy loam, deep phase
- 12c - Deschutes sandy loam, deep phase
- 13 - Madras stony sandy loam
- 13c - Deschutes stony sandy loam
- 90 - Deschutes stony sandy loam
- 26 - Deschutes loamy sand
- 9c - Deschutes loamy sand
- 24 - Deschutes loamy sand

- 27 - Madras sandy loam
- 11c - Deschutes sandy loam
- 25 - Deschutes sandy loam
- 28 - Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16 - Metolius sandy loam
- 47 - Deschutes loamy coarse sand
- 46 - Deschutes loamy sand
- 49 - Deschutes coarse sandy loam
- 65 - Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30 - Lamonta loam
- 31 - Lamonta sandy clay loam
- 32 - Lamonta stony sandy clay loam
- 33 - Lamonta stony loam
- 34 - Lamonta sandy clay loam, shallow phase
- 84 - Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35 - Agency sandy loam
- 37 - Agency gravelly loam
- 70 - Gem loam
- 36 - Agency loam
- 63 - Agency stony loam
- 74 - Gem clay loam
- 73 - Gem clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39 - Madras loam
- 40 - Madras sandy loam
- 68 - Madras stony loam
- 85 - Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42 - Metolius sandy loam
- 60 - Metolius sandy loam
- 61 - Metolius fine sandy loam

- 52 - Metolius sandy loam
- 92 - Metolius heavy sand
- 6X - Laidlaw sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51 - Odin clay loam
- 52 - Odin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 - Redmond loam
- 75 - Redmond sandy loam
- 75d - Redmond sandy loam, deep phase
- 76 - Redmond clay loam

#### MISCELLANEOUS SOILS

- 100 - Rough broken land
- 200 - Rough stony land
- RW - Riverwash
- 91 - Volcanic ash
- 1 - Scabland

### EROSION

#### SHEET EROSION

- 1 - Less than 25 percent of the surface soil lost
- 2 - 25 percent to 75 percent of the surface soil lost
- 3 - 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 - 25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

- 7 - Occasional shallow gullies
- 7a - Occasional gullies uncrossable by farm machinery
- 8 - Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 8a - Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P - Up to 25 percent of surface soil removed
- R - 25 percent to 75 percent of surface soil removed
- S - 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F - Accumulations 0 inches to 6 inches deep, level
- H - Accumulations 6 inches to 12 inches deep, level
- K - Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W - Normal erosion
- O - No accelerated erosion
- 6 - Undifferentiated erosion (farms, roads, urban areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land - Land formerly cultivated but now abandoned in annual grasses, creosote, wheat grasses, or brodiaea

Range land, Annual or perennial grasses or sagebrush

Woodland, Juniper or Pinon pine

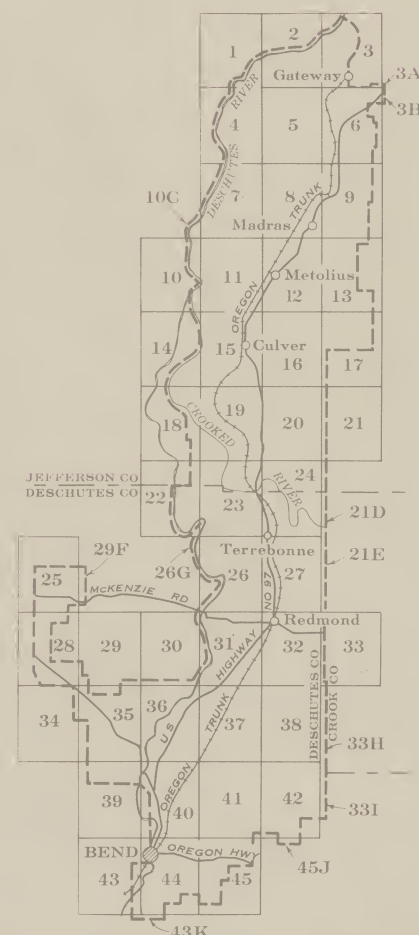
Idle land

Fertilized and tilled area

### SLOPE

DOMINANT PERCENT	DOMINANT PERCENT
A 0 to 3	D 13 to 20
B 4 to 7	E 21 to 35
C 8 to 12	F 36 and over

## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revision to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 5000 foot grid based upon Tropic system (North Zone). All plane coordinates with last three digits of grid numbers omitted. Polyconic projection indicated by marginal ticks.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads - Hard-surfaced
- Semihard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Covert
- Ford
- Railroads - Single track

### WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

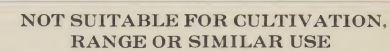
### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Equipment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Creeks or ditches
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Spring
- Swamp
- Marsh



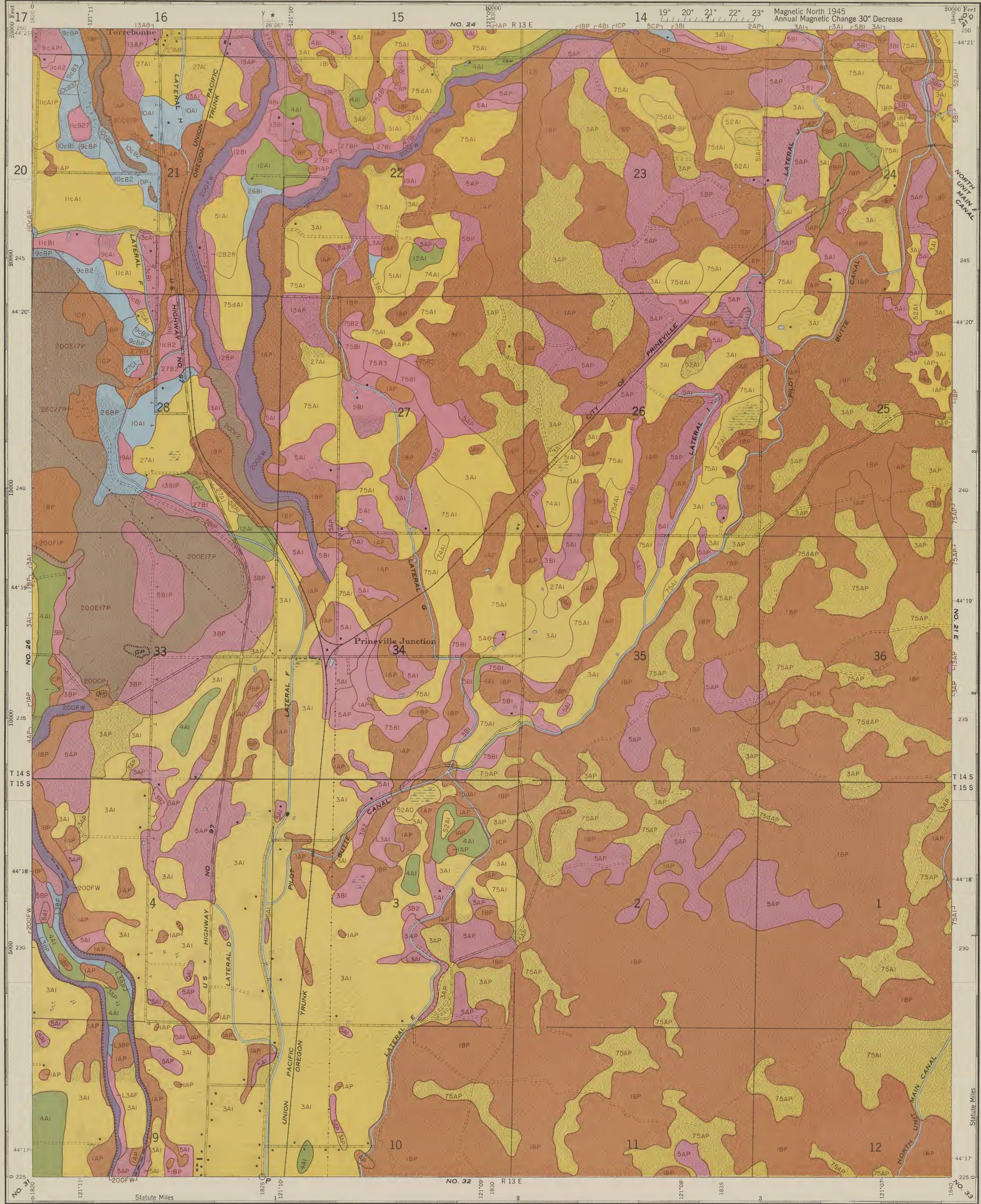


VIII-Very steep, stony or droughty lands;  
essentially non-productive.









SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands, essentially non-productive. |
|---|--|---|--|---|--|---|



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R Madras sandy loam. C-Slope, 8 percent to 12 percent.  
27 Sheet erosion, 25 percent to 75 percent lost. R-Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Era sandy loam
- 13- Deschutes loamy sand
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes stony sandy loam
- 19- Deschutes stony loam
- S43- Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase
- 10c- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
- 12c- Deschutes sandy loam, deep phase
- 13- Madras stony sandy loam
- 13c- Deschutes stony sandy loam
- 90- Deschutes stony sandy loam
- 26- Deschutes loamy sand
- 26c- Deschutes loamy sand
- 24- Deschutes loamy sand

- 27- Madras sandy loam
- 11c- Deschutes sandy loam
- 25- Deschutes sandy loam
- 28- Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16- Metolius sandy loam
- 47- Deschutes loamy coarse sand
- 46- Deschutes loamy sand
- 49- Deschutes coarse sandy loam
- 65- Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonta loam
- 31- Lamonta sandy clay loam
- 32- Lamonta stony sandy clay loam
- 33- Lamonta stony loam
- 34- Lamonta sandy clay loam, shallow phase
- 84- Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam
- 37- Agency gravelly loam
- 70- Gem loam
- 36- Agency loam
- 63- Agency clay loam
- 71- Gem clay loam
- 73- Gem clay loam, similar phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39- Madras loam
- 40- Madras sandy loam
- 66- Madras sandy loam
- 83- Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42- Metolius sandy loam
- 60- Metolius sandy loam
- 61- Metolius fine sandy loam

- 62- Metolius sandy loam
- 92- Metolius loamy sand
- 6X- Laidlaw sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51- Odin clay loam
- 52- Odin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74- Redmond loam
- 75- Redmond sandy loam
- 76- Redmond sandy loam, deep phase
- 76- Redmond clay loam

#### MISCELLANEOUS SOILS

- 100- Rough broken land
- 200- Rough stony land
- RW- Riverwash
- 91- Volcanic ash
- 1- Scabland

### EROSION

#### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 75 percent of the surface soil lost
- 3- 75 percent to 100 percent of the surface soil lost
- 4- Up to 25 percent of the B horizon lost
- 5- 25 percent to 50 percent of the B horizon lost

#### TULLY EROSION

- 7- Occasional shallow gullies
- 8- Occasional gullies uncrossable by farm machinery
- 9- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 10- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P- Up to 25 percent of surface soil removed
- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level
- H- Accumulations 6 inches to 12 inches deep, level
- K- Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- B- Undifferentiated erosion (farmsteads, urban areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Rangeland, land formerly cultivated but now abandoned, in annual grasses, crested wheat grasses, or browse

Rangeland, Annual or perennial grasses or leguminous

Woodland, Juniper or Pinus sp. zone

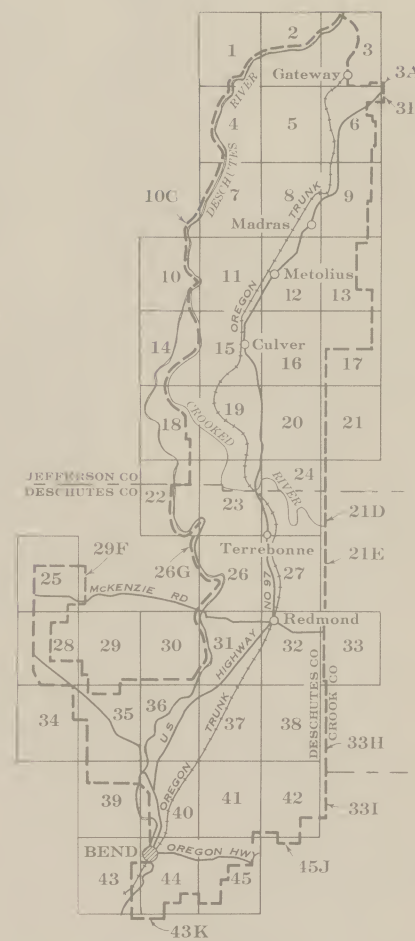
Idle land

Barren land and brush land

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

From U.S.G.S. quadrangles. Revised to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 800-foot grid based upon Oregon system (North Zone). Plane coordinates with last three digits of grid numbers omitted. Polyconic projection indicated by marginal ticks.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads- Hard-surfaced
- Semi-hard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroad- Single track

### WORKS AND STRUCTURES

- Railroads- Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

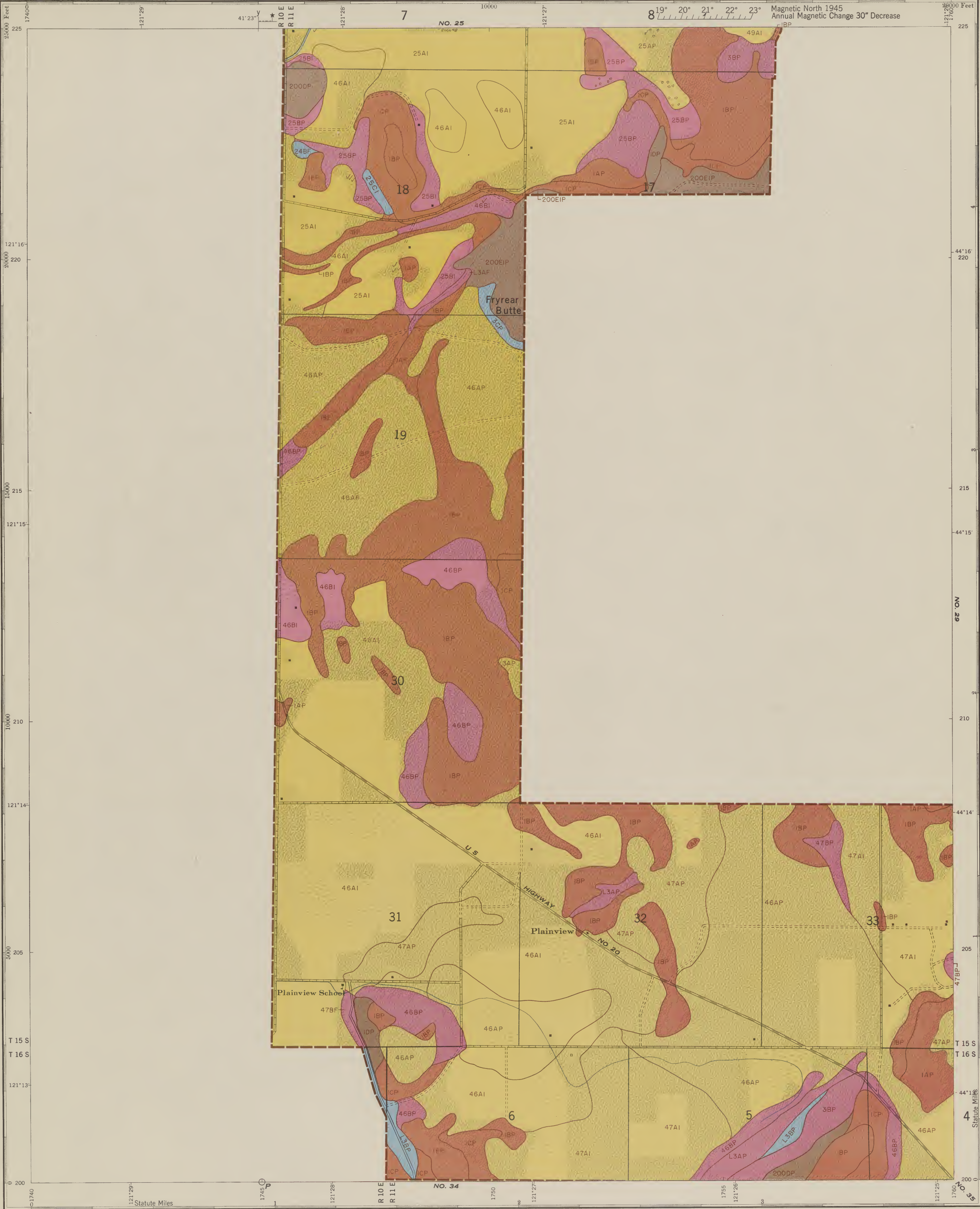
### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- CONSERVATION SURVEY DATA (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Sinks
- Springs
- Marsh





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.

II-Nearly level, moderately deep, permeable soils having minor limitations in use.

III-Moderately deep soils with stone, slope or texture limitations.

IV-Shallow, droughty or moderately sloping soils limited to pasture use.

VI-Sloping, very stony lands suited for range, having minor conservation needs.

VII-Sloping, very stony lands suited for range, having major conservation needs.

VIII-Very steep, stony or droughty lands; essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
 27-50% type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
 2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase.
- 3- Deschutes sandy loam.
- 43- Era sandy loam.
- L3- Deschutes loamy sand.
- 4- Deschutes sandy loam, deep phase.
- 5- Deschutes stony sandy loam.
- 19- Deschutes stony loam.
- S43- Era stony sandy loam.

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase.
- 10c- Deschutes sandy loam, shallow phase.
- 12- Madras sandy loam, deep phase.
- 12c- Deschutes sandy loam, deep phase.
- 13- Madras stony sandy loam.
- 13c- Deschutes stony sandy loam.
- 90- Deschutes stony sandy loam.
- 26- Deschutes loamy sand.
- 9c- Deschutes loamy sand.
- 24- Deschutes loamy sand.

- 27- Madras sandy loam.
- 11c- Deschutes sandy loam.
- 25- Deschutes sandy loam.
- 28- Madras loam.

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS

- 16- Metolius sandy loam.
- 47- Deschutes loamy coarse sand.
- 46- Deschutes loamy sand.
- 49- Deschutes coarse sandy loam.
- 65- Deschutes loamy sand, over riverwash.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonta loam.
- 31- Lamonta sandy clay loam.
- 32- Lamonta stony sandy clay loam.
- 33- Lamonta stony loam.
- 34- Lamonta sandy clay loam, shallow phase.
- 84- Lamonta loam, shallow phase.

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam.
- 37- Agency gravelly loam.
- 70- Gem loam.
- 36- Agency loam.
- 63- Agency stony loam.
- 71- Gem clay loam.
- 73- Gem clay loam, shallow phase.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39- Madras loam.
- 40- Madras sandy loam.
- 68- Madras stony loam.
- 85- Madras clay loam.

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42- Metolius sandy loam.
- 60- Metolius sandy loam.
- 61- Metolius fine sandy loam.

- 62- Metolius sandy loam.
- 92- Metolius loamy sand.
- 6X- Laidlaw sandy loam.

#### POORLY DRAINED LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51- Odin clay loam.
- 52- Odin sandy loam.

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74- Redmond loam.
- 75- Redmond sandy loam.
- 75d- Redmond sandy loam, deep phase.
- 76- Redmond clay loam.

#### MISCELLANEOUS SOILS

- 100- Rough broken land.
- 200- Rough stony land.
- RW- Riverwash.
- 91- Volcanic ash.
- 1- Scabland.

### EROSION

#### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost.
- 2- 25 percent to 75 percent of the surface soil lost.
- 3- 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost.
- 4- 25 percent to 50 percent of the B horizon lost.

#### GULLY EROSION

- 7- Occasional shallow gullies.
- ⑦- Occasional gullies uncrossable by farm machinery.
- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre.
- ⑧- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre.

#### WIND EROSION

- P- Up to 25 percent of surface soil removed.
- R- 25 percent to 75 percent of surface soil removed.
- S- 75 percent to 100 percent of surface soil removed.

#### WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level.
- H- Accumulations 6 inches to 12 inches deep, level.
- K- Accumulations 6 inches to 12 inches deep, hummocky.
- Line accumulations too narrow to include within boundaries.

#### MISCELLANEOUS

- W- Normal erosion.
- O- No accelerated erosion.
- ⑥- Undifferentiated erosion (farmsteads, urban areas).

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses.

Range land. Land formerly cultivated but now abandoned, in annual grasses, crested wheat grasses, or briar.

Range land. Annual or perennial grasses or sagebrush.

Woodland. Juniper or Ponderosa pine.

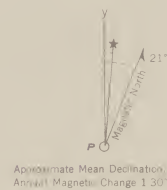
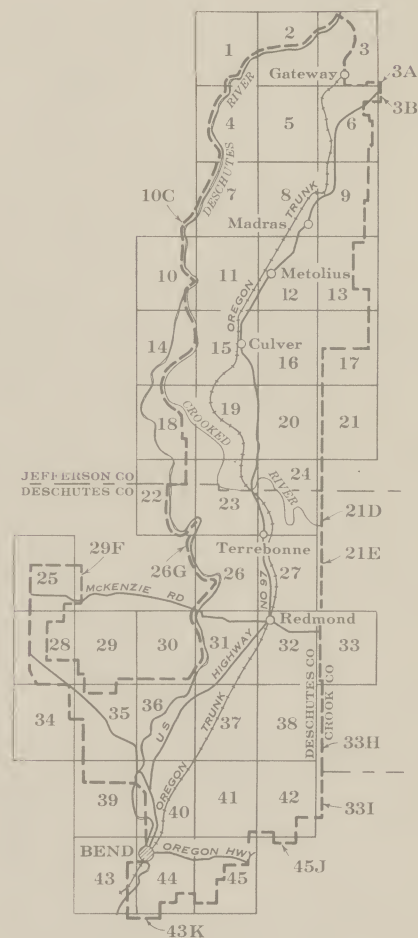
Ridge land.

Farmstead and urban areas.

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

## INDEX



Approximate Mean Declination, 1945  
 Annual Magnetic Change 1.30° West  
 USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 500' foot grid based upon Oregon system (North Zone). All plane coordinates with last three digits of grid numbers omitted. Polyconic projection indicated by marginal ticks.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads- Hard-surfaced
- Semihard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads- Single track

### WORKS AND STRUCTURES

- Railroads- Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

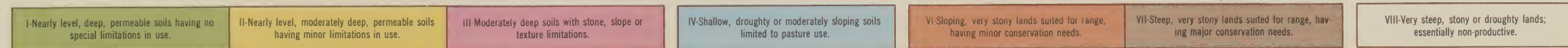
### BOUNDARIES, MARKS, AND MONUMENTS

- County
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- Section
- City
- CONSERVATION SURVEY DATA (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Sinks
- Springs
- Marsh

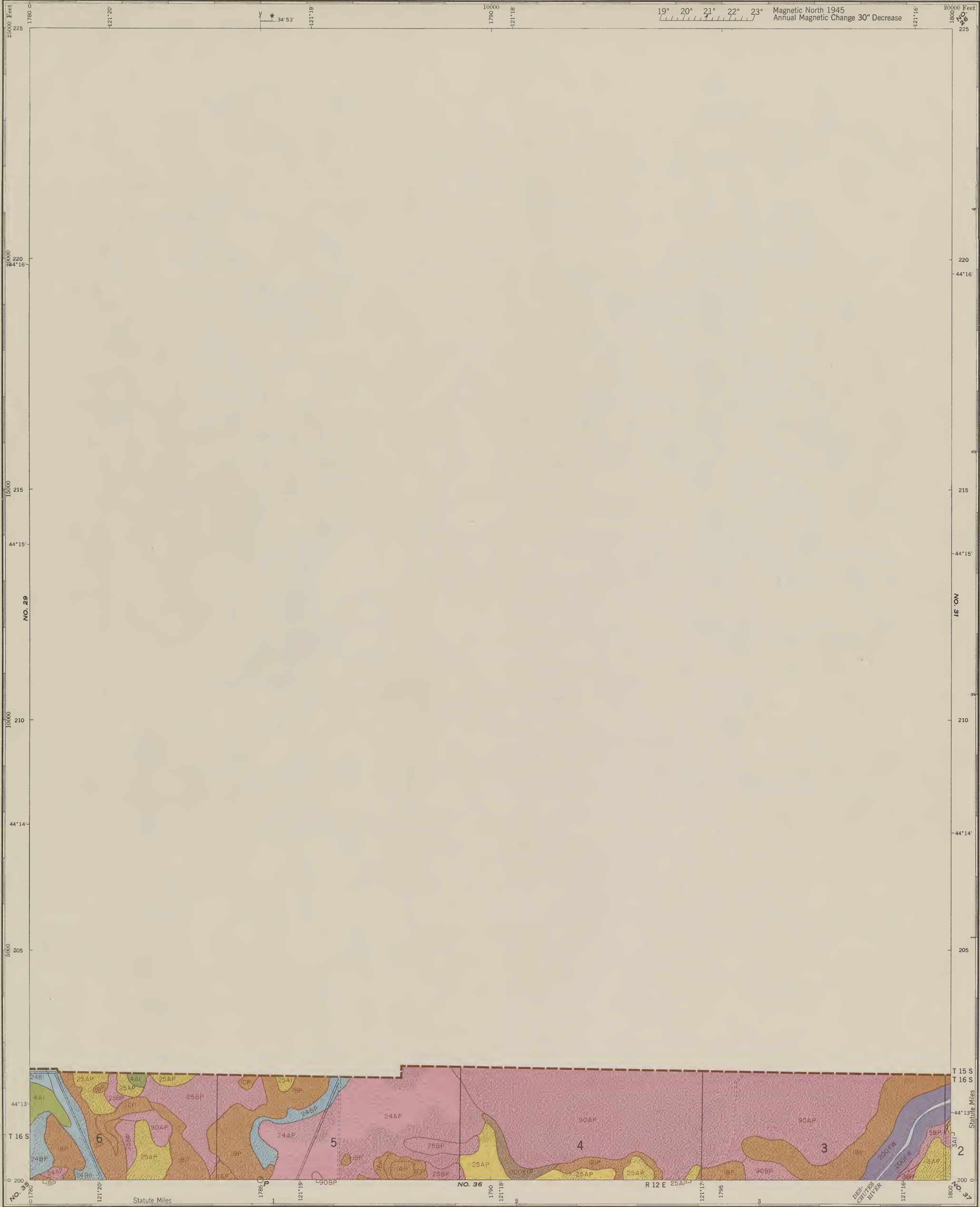












SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.	II-Nearly level, moderately deep, permeable soils having minor limitations in use.	III-Moderately deep soils with stone, slope or texture limitations.	IV-Shallow, droughty or moderately sloping soils limited to pasture use.	VI-Sloping, very stony lands suited for range, having minor conservation needs.	VII-Steep, very stony lands suited for range, having major conservation needs.	VIII-Very steep, stony or droughty lands; essentially non-productive.
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DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

LEGEND

EXPLANATION OF SYMBOL

27C2R 27- Soil type, Madras sandy loam. C- Shyre, 8 percent to 12 percent.  
2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

SOILS

LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Era sandy loam
- L3- Deschutes loamy sand
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes stony sandy loam
- 19- Deschutes stony loam
- S43- Era stony sandy loam

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase
- 10c- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
- 12c- Deschutes sandy loam, deep phase
- 13- Madras stony sandy loam
- 13c- Deschutes stony sandy loam
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- 24- Deschutes loamy sand

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- 25- Deschutes sandy loam
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- 84- Lamonta loam, shallow phase

LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam
- 37- Agency gravelly loam
- 70- Gem loam
- 36- Agency loam
- 62- Agency stony loam
- 71- Gem clay loam
- 73- Gem clay loam, shallow phase

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39- Madras loam
- 40- Madras sandy loam
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- 85- Madras clay loam

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- 42- Metolius sandy loam
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- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
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WIND EROSION

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- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level
- H- Accumulations 6 inches to 12 inches deep, level
- K- Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- 6- Undifferentiated erosion (farms, roads, urban areas)

LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land. Land formerly cultivated but now abandoned, in annual grasses, crested wheat grasses, or brush

Range land. Annual or perennial grasses or brush

Woodland. Juniper or Ponderosa pine

Idle land

Farmstead and urban areas

SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
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- School

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- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

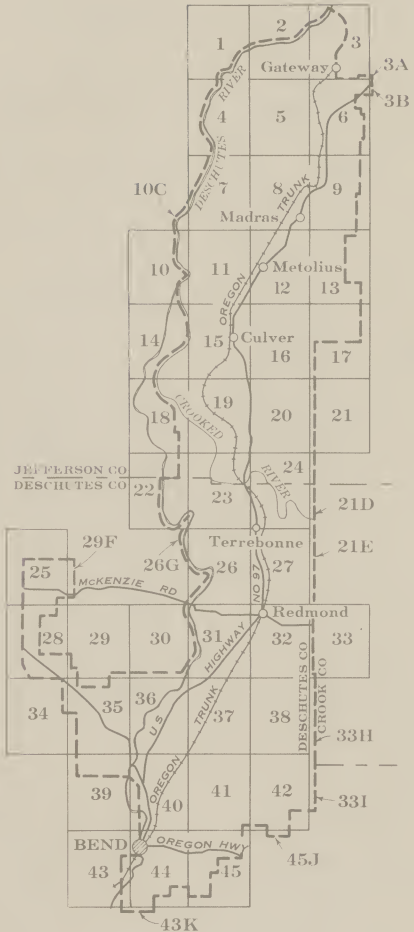
BOUNDARIES, MARKS, AND MONUMENTS

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- City
- CONSERVATION SURVEY DATA (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Creeks or alluvies
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Sinks
- Spring
- Marsh

INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base

and conservation survey compiled by Soil Conservation

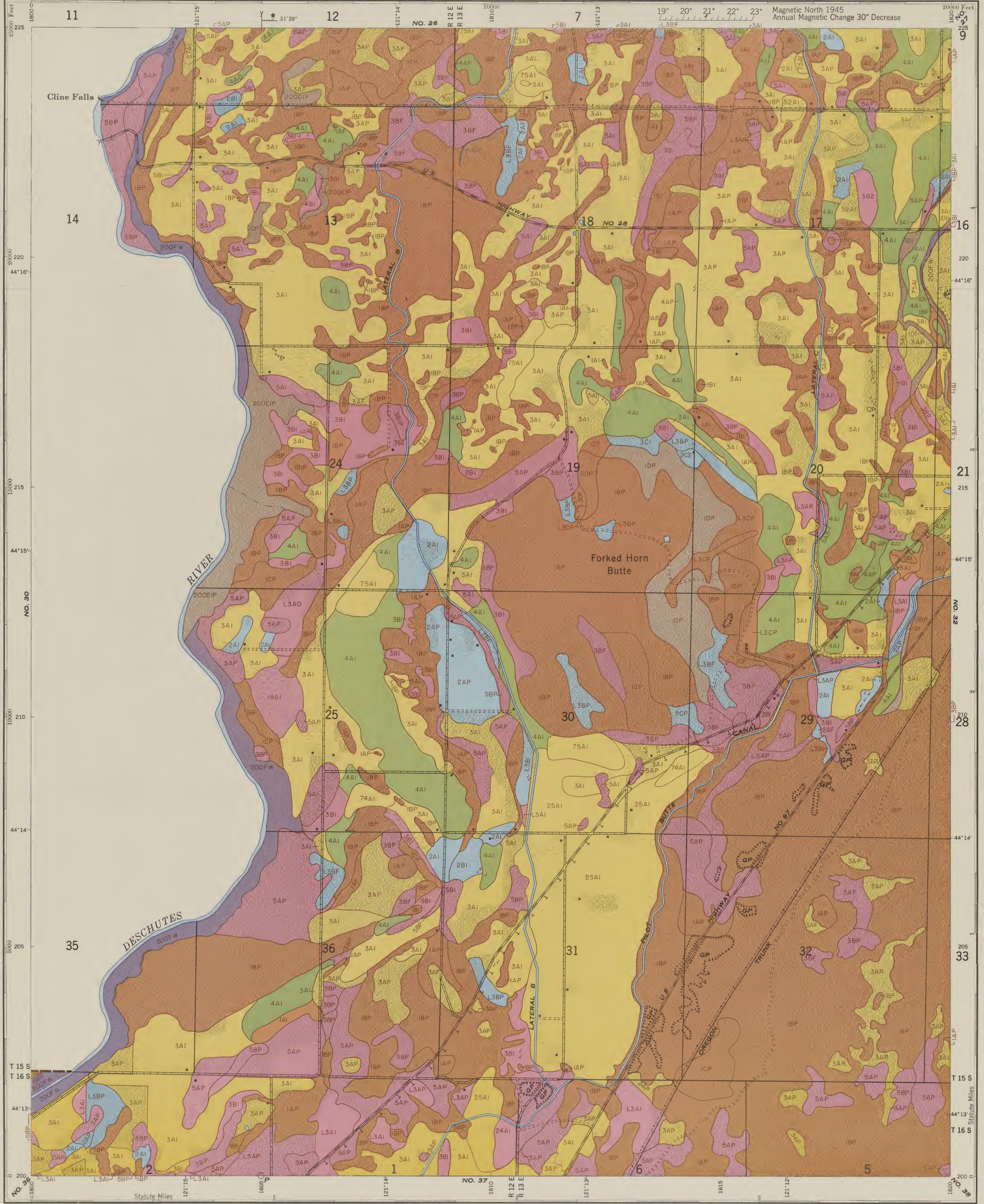
Service from aerial photographs. Lambert projection.

5000' foot grid based upon Oregon system (North Zone)

of plane coordinates with last three digits of grid omitted.

omitted. Polyconic projection indicated by marginal notes.





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.

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IV-Shallow, droughty or moderately sloping soils limited to pasture use.

VI-Sloping, very stony lands suited for range, having minor conservation needs.

VII-Steep, very stony lands suited for range, having major conservation needs.

VIII-Very steep, stony or droughty lands; essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,810

## LEGEND

### EXPLANATION OF SYMBOL

27-32%  
27-32% Slope, 8 percent to 12 percent  
27-32% Slope, 25 percent to 75 percent (S.L. R. Wind erosion, 25 percent to 75 percent) removed by wind

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 - Deschutes sandy loam, shallow phase
- 3 - Deschutes sandy loam
- 43 - Era sandy loam
- 13 - Deschutes loamy sand
- 4 - Deschutes sandy loam, deep phase
- 5 - Deschutes stony sandy loam
- 19 - Deschutes stony loam
- S43 - Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 - Madras sandy loam, shallow phase
- 10c - Deschutes sandy loam, shallow phase
- 12 - Madras sandy loam, deep phase
- 12c - Deschutes sandy loam, deep phase
- 13 - Madras stony sandy loam
- 13c - Deschutes stony sandy loam
- 90 - Deschutes stony sandy loam
- 26 - Deschutes loamy sand
- 9c - Deschutes loamy sand
- 24 - Deschutes loamy sand

- 27 - Madras sandy loam
- 11c - Deschutes sandy loam
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#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER COARSE MATERIALS

- 16 - Metolius sandy loam
- 47 - Deschutes loamy coarse sand
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- 49 - Deschutes coarse sandy loam
- 65 - Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30 - Lamont loam
- 31 - Lamont sandy clay loam
- 32 - Lamont stony sandy clay loam
- 33 - Lamont stony loam
- 34 - Lamont stony clay loam, shallow phase
- 84 - Lamont loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35 - Agency sandy loam
- 37 - Agency gravelly loam
- 70 - loam loam
- 35 - Agency loam
- 63 - Agency stony loam
- 71 - loam clay loam
- 73 - loam clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER TIME HARDPAN

- 39 - Madras loam
- 40 - Madras sandy loam
- 68 - Madras stony loam
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#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42 - Metolius sandy loam
- 60 - Metolius sandy loam
- 61 - Metolius fine sandy loam

- 62 - Metolius sandy loam
- 62 - Metolius loamy sand
- 6X - Laidlaw sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51 - loam clay loam
- 52 - loam sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 - Redmond loam
- 75 - Redmond sandy loam
- 75d - Redmond sandy loam, deep phase
- 76 - Redmond clay loam

#### MISCELLANEOUS SOILS

- 100 - Rough broken land
- 200 - Rough stony land
- RW - Riverwash
- 91 - Volcanic ash
- 1 - Scabland

### EROSION

#### SHEET EROSION

- 1 - Less than 25 percent of the surface soil lost
- 2 - 25 percent to 75 percent of the surface soil lost
- 3 - 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 - 25 percent to 50 percent of the B horizon lost

#### BULLY EROSION

- 7 - Occasional shallow gullies
- 8 - Occasional gullies uncrossable by farm machinery
- 8 - Shallow gullies less than 100 feet apart laterally or more than 5 per acre
- 9 - Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P - Up to 25 percent of surface soil removed
- R - 25 percent to 75 percent of surface soil removed
- S - 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F - Accumulations 0 inches to 6 inches deep, level
- H - Accumulations 6 inches to 12 inches deep, level
- K - Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W - Normal erosion
- O - No accelerated erosion
- 9 - Undifferentiated erosion (undifferentiated areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover, and grasses

Rangeland, land formerly rangeland but now abandoned in annual crops, cropland, wheat, grasses, or brush

Rangeland, Annual to perennial crops or sagebrush

Woodland, dense or moderate cover

Timberland

Farmland and Indian land

### SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

- Roads - Hard-surfaced
- Semi-hard-surfaced
- Dirt (good material)
- Dirt (poor material or private)
- Bridge
- Culvert
- Ford
- Railroads - Single track

#### WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Culvert
- Buildings in general
- Church
- School

#### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Canals
- Ditch
- Gravel pit
- Mine quarry

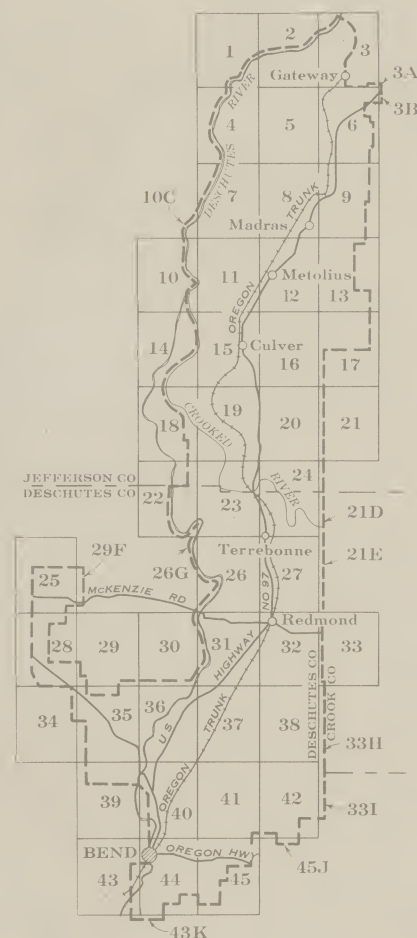
#### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Survey area
- Escarpment

#### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Drains or ditches
- Canal (lined)
- Water tanks
- Ponds, reservoirs
- Spring
- Marsh

## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. Swampy. Revisits to base and conservation maps compiled by Soil Conservation Service from aerial photographs. Lambert projection. U.S.G.S. 1:100,000 based on U.S.G.S. system (North Zone). Elevation elevations with last three digits of grid number omitted. Elevation elevations indicated by marginal scale.





VIII-Very steep, stony or droughty lands;  
essentially non-productive.



DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

LEGEND

EXPLANATION OF SYMBOL

27C2R  
27-Soil type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

SOILS

LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL.

- 2 - Deschutes sandy loam, shallow phase.
- 3 - Deschutes sandy loam.
- 43 - Era sandy loam.
- L3 - Deschutes loamy sand.
- 4 - Deschutes sandy loam, deep phase.
- 5 - Deschutes stony sandy loam.
- 19 - Deschutes stony loam.
- S43 - Era stony sandy loam.

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL.

- 10 - Madras sandy loam, shallow phase.
- 10c - Deschutes sandy loam, shallow phase.
- 12 - Madras sandy loam, deep phase.
- 12c - Deschutes sandy loam, deep phase.
- 13 - Madras stony sandy loam.
- 13c - Deschutes stony sandy loam.
- 90 - Deschutes stony sandy loam.
- 26 - Deschutes loamy sand.
- 9c - Deschutes loamy sand.
- 24 - Deschutes loamy sand.

- 27 - Madras sandy loam.
- 11c - Deschutes sandy loam.
- 25 - Deschutes sandy loam.
- 28 - Madras loam.

LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS.

- 16 - Metolius sandy loam.
- 47 - Deschutes loamy coarse sand.
- 46 - Deschutes loamy sand.
- 49 - Deschutes coarse sandy loam.
- 65 - Deschutes loamy sand over riverwash.

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS.

- 30 - Lamonta loam.
- 31 - Lamonta sandy clay loam.
- 32 - Lamonta stony sandy clay loam.
- 33 - Lamonta stony loam.
- 34 - Lamonta sandy clay loam, shallow phase.
- 84 - Lamonta loam, shallow phase.

LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS.

- 35 - Agency sandy loam.
- 37 - Agency gravelly loam.
- 70 - Gem loam.
- 36 - Agency loam.
- 63 - Agency stony loam.
- 71 - Gem clay loam.
- 73 - Gem clay loam, shallow phase.

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN.

- 39 - Madras loam.
- 40 - Madras sandy loam.
- 68 - Madras stony loam.
- 85 - Madras clay loam.

LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS.

- 42 - Metolius sandy loam.
- 60 - Metolius sandy loam.
- 61 - Metolius fine sandy loam.

- 62 - Metolius sandy loam.
- 92 - Metolius loamy sand.
- 6X - Laidlaw sandy loam.

POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS.

- 51 - Odin clay loam.
- 52 - Odin sandy loam.

LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS.

- 74 - Redmond loam.
- 75 - Redmond sandy loam.
- 75d - Redmond sandy loam, deep phase.
- 76 - Redmond clay loam.

MISCELLANEOUS SOILS.

- 100 - Rough broken land.
- 200 - Rough stony land.
- RW - Riverwash.
- 91 - Volcanic ash.
- 1 - Scabland.

EROSION

SHEET EROSION

- 1 - Less than 25 percent of the surface soil lost
- 2 - 25 percent to 75 percent of the surface soil lost
- 3 - 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 - 25 percent to 50 percent of the B horizon lost

GULLY EROSION

- 7 - Occasional shallow gullies
- ⑦ - Occasional gullies uncrossable by farm machinery
- 8 - Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- ⑧ - Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

WIND EROSION

- P - Up to 25 percent of surface soil removed
- R - 25 percent to 75 percent of surface soil removed
- S - 75 percent to 100 percent of surface soil removed

WIND DEPOSITS

- F - Accumulations 0 inches to 6 inches deep, level
- H - Accumulations 6 inches to 12 inches deep, level
- K - Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

MISCELLANEOUS

- W - Normal erosion
- O - No accelerated erosion
- ⑥ - Undifferentiated erosion (farmsteads, urban areas)

LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land. Land formerly cultivated but now abandoned, in annual grasses, crested wheat grasses, or browse

Range land. Annual or perennial grasses or sagebrush

Woodland. Juniper or Ponderosa pine

Idle land

Farmstead and urban area

SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

GEOGRAPHIC SYMBOLS

WORKS AND STRUCTURES

- Roads - Hard surfaced
- Semihard surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads - Single track

WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine

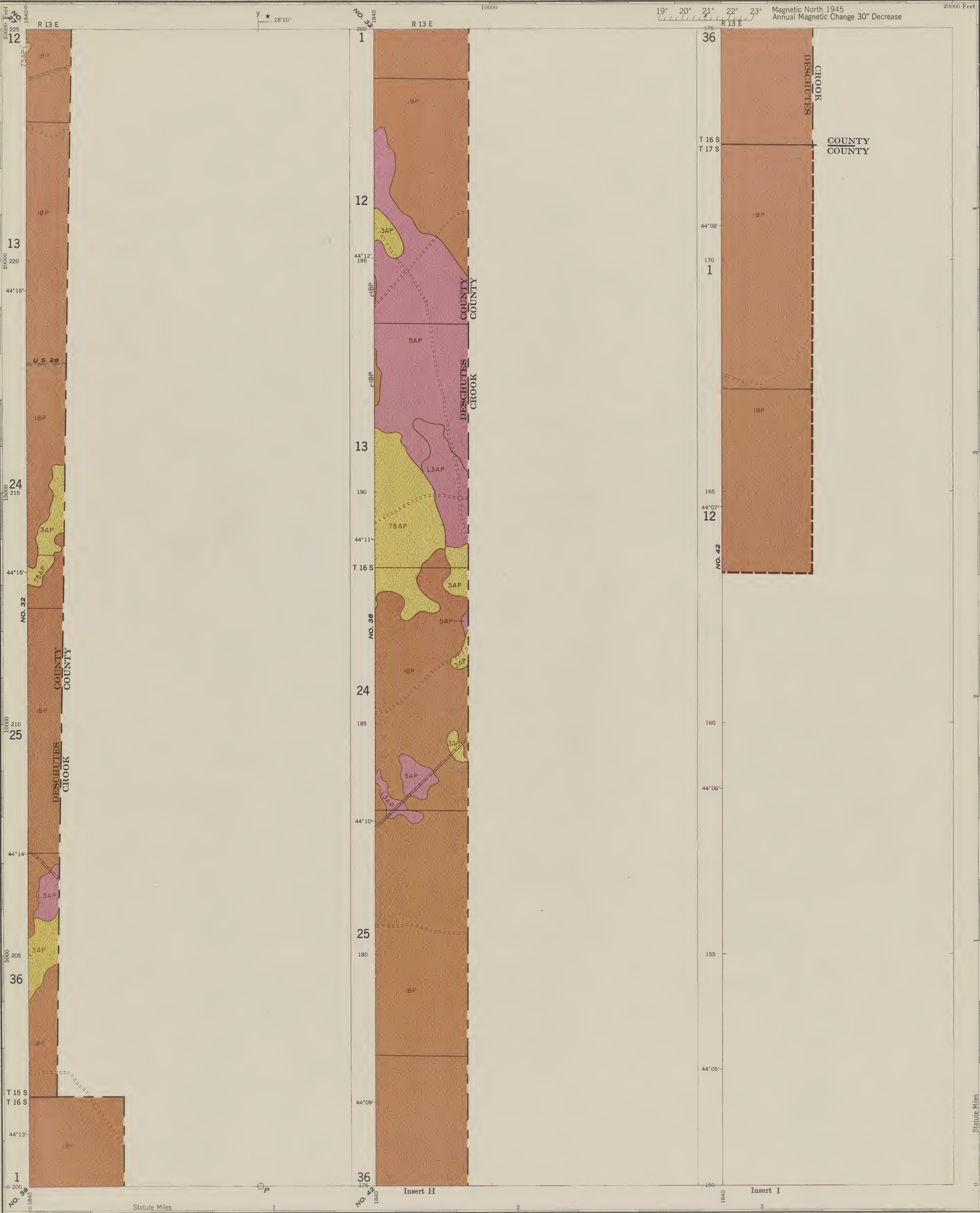
BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- CONSERVATION SURVEY DATA (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Firearm

DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Borehole
- Marsh
- Well
- Sinks





SUITABLE FOR CULTIVATION		SUITABLE FOR OCCASIONAL CULTIVATION		NOT SUITABLE FOR CULTIVATION		NOT SUITABLE FOR CULTIVATION, RANGE OR SIMILAR USE	
I-Nearly level, deep, permeable soils having no special limitations in use.	II-Nearly level, moderately deep, permeable soils having minor limitations in use.	III-Moderately deep soils with stone, slope or texture limitations.	IV-Shallow, droughty or moderately sloping soils limited to pasture use.	VI-Sloping, very stony lands suited for range, having minor conservation needs.	VII-Steep, very stony lands suited for range, having major conservation needs.	VIII-Very steep, stony or droughty lands; essentially non-productive.	



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
 27- Soil type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
 2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Era sandy loam
- L3- Deschutes loamy sand
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes stony sandy loam
- 19- Deschutes stony loam
- S43- Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase
- 10c- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
- 12c- Deschutes sandy loam, deep phase
- 13- Madras stony sandy loam
- 13c- Deschutes stony sandy loam
- 90- Deschutes stony sandy loam
- 26- Deschutes loamy sand
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- 27- Madras sandy loam
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#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS

- 16- Metolius sandy loam
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- 49- Deschutes coarse sandy loam
- 65- Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED, MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonta loam
- 31- Lamonta sandy clay loam
- 32- Lamonta stony sandy clay loam
- 33- Lamonta stony loam
- 34- Lamonta sandy clay loam, shallow phase
- 84- Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam
- 37- Agency gravelly loam
- 70- Gem loam
- 36- Agency loam
- 63- Agency stony loam
- 71- Gem clay loam
- 73- Gem clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN.

- 39- Madras loam
- 40- Madras sandy loam
- 68- Madras stony loam
- 85- Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS.

- 42- Metolius sandy loam
- 60- Metolius sandy loam
- 61- Metolius fine sandy loam

- 52- Metolius sandy loam
- 92- Metolius loamy sand
- EX- Laidlaw sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED, CONSOLIDATED MATERIALS.

- 51- Odin clay loam
- 52- Odin sandy loam

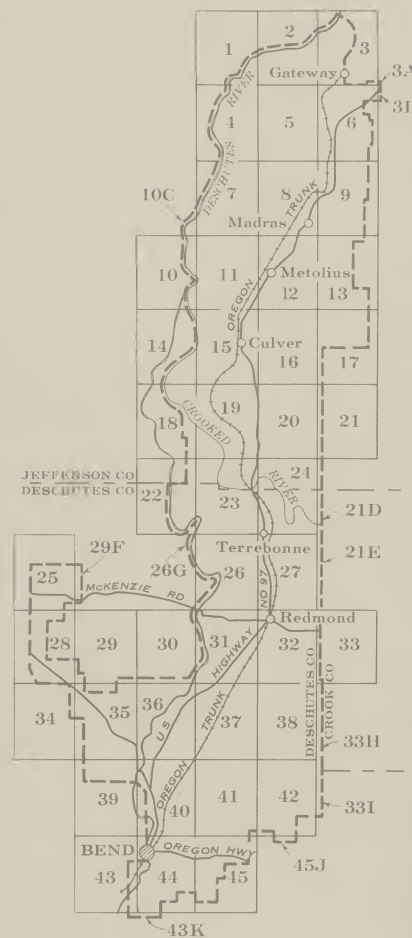
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- 75- Redmond sandy loam
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#### MISCELLANEOUS SOILS

- 100- Rough broken land
- 200- Rough stony land
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- 91- Volcanic ash
- 1- Scabland

## INDEX



## EROSION

### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 75 percent of the surface soil lost
- 3- 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4- 25 percent to 50 percent of the B horizon lost

### GULLY EROSION

- 7- Occasional shallow gullies
- ⑦- Occasional gullies uncrossable by farm machinery
- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- ⑧- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

### WIND EROSION

- P- Up to 25 percent of surface soil removed
- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

### WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level
- H- Accumulations 6 inches to 12 inches deep, level
- K- Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

### MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- Θ- Undifferentiated erosion (farmstead, irrigated area)

## LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land, land formerly cultivated but now abandoned, in annual grasses, crested wheat grasses, or browse

Range land, Annual or perennial grasses or sagebrush

Woodland, Juniper or Ponderosa pine

Idle land

Farmstead and irrigated area

## SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads: Hard-surfaced
- Semi-hard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads: Single track

### WORKS AND STRUCTURES

- Railroads: Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tank
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Springs
- Marsh

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 30' x 30' grid based upon Oregon system (North Zone) of plane coordinates with last three digits of grid number printed. (Flowing direction indicated by marginal line.)





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.	II-Nearly level, moderately deep, permeable soils having minor limitations in use.	III-Moderately deep soils with stone, slope or texture limitations.	IV-Shallow, droughty or moderately sloping soils limited to pasture use.	VI-Sloping, very stony lands suited for range, having minor conservation needs.	VII-Steep, very stony lands suited for range, having major conservation needs.	VIII-Very steep, stony or droughty lands; essentially non-productive.
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# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27- Soil type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
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### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase.
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- L3- Deschutes loamy sand.
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#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase.
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#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

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#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

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#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42- Metolius sandy loam.
- 60- Metolius sandy loam.
- 61- Metolius fine sandy loam.

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- 6X- Laidlaw sandy loam.

#### POORLY DRAINED LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

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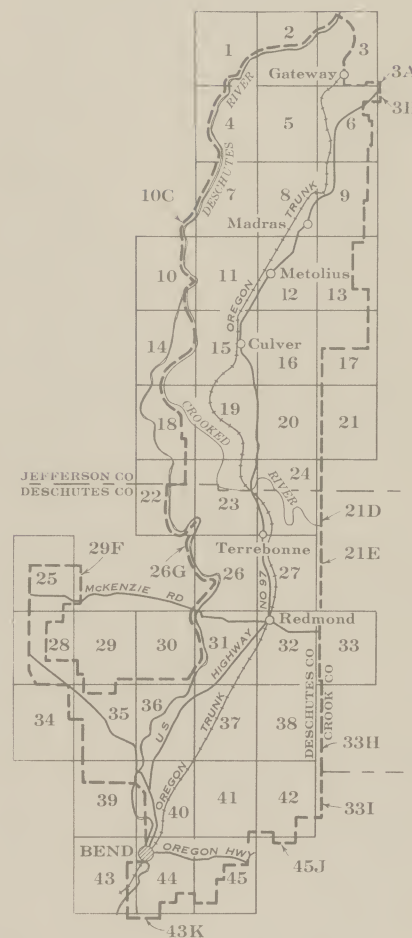
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## INDEX



### EROSION

#### SHEET EROSION

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#### GULLY EROSION

- 7- Occasional shallow gullies.
- ⑦- Occasional gullies uncrossable by farm machinery.
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- K- Accumulations 6 inches to 12 inches deep, hummocky.
- Line accumulations too narrow to include within boundaries.

#### MISCELLANEOUS

- W- Normal erosion.
- O- No accelerated erosion.
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### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses.

Range land. Land formerly cultivated but now abandoned, in annual grasses, treated wheat grasses, or likewise.

Range land. Annual or perennial grasses or sagebrush.

Woodland. Juniper or Ponderosa pine.

Idle land.

Farmstead and urban area.

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
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## GEOGRAPHIC SYMBOLS

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- Semi-hard-surfaced
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- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads- Single track

### WORKS AND STRUCTURES

- Railroads- Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephoning line
- Pipe line
- Cemeteries
- Dams
- Grave pit
- Mine claim

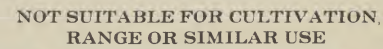
### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Slurry area
- Rock outcrops
- Encampment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Springs
- Marsh





Very steep, stony or droughty lands;  
essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27- Soil type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
2- Sheet erosion, 25 percent to 75 percent incl. R- Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam.
- 43- Era sandy loam.
- L3- Deschutes loamy sand.
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes stony sandy loam
- 19- Deschutes stony loam.
- S43- Era stony sandy loam.

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase
- 10c- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
- 12c- Deschutes sandy loam, deep phase
- 13- Madras stony sandy loam.
- 13c- Deschutes stony sandy loam
- 19- Deschutes stony sandy loam.
- 24- Deschutes loamy sand.
- 24- Deschutes loamy sand.

- 27- Madras sandy loam
- 11c- Deschutes sandy loam.
- 25- Deschutes sandy loam.
- 28- Madras loam.

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS

- 16- Metolius sandy loam.
- 47- Deschutes loamy coarse sand.
- 46- Deschutes loamy sand.
- 49- Deschutes coarse sandy loam.
- 65- Deschutes loamy sand over riverwash.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 40- Lamonta loam
- 31- Lamonta sandy clay loam
- 32- Lamonta stony sandy clay loam
- 33- Lamonta stony loam.
- 34- Lamonta sandy clay loam, shallow phase
- 84- Lamonta loam, shallow phase.

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam.
- 37- Agency gravelly loam.
- 70- Gem loam.
- 36- Agency loam.
- 63- Agency stony loam.
- 71- Gem clay loam.
- 73- Gem clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN.

- 39- Madras loam.
- 40- Madras sandy loam.
- 68- Madras sandy loam.
- 85- Madras clay loam.

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS.

- 42- Metolius sandy loam.
- 60- Metolius sandy loam.
- 61- Metolius fine sandy loam

- 62- Metolius sandy loam.
- 92- Metolius loamy sand.
- 5X- Laidlaw sandy loam.

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS.

- 51- Odin clay loam.
- 52- Odin sandy loam.

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74- Redmond loam.
- 75- Redmond sandy loam.
- 75d- Redmond sandy loam, deep phase.
- 76- Redmond clay loam.

#### MISCELLANEOUS SOILS.

- 100- Rough broken land.
- 200- Rough stony land
- RW- Riverwash
- 91- Volcanic ash.
- 1- Scabland.

### EROSION

#### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 75 percent of the surface soil lost
- 3- 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost.
- 4- 25 percent to 50 percent of the B horizon lost.

#### GULLY EROSION

- 7- Occasional shallow gullies
- 17- Occasional gullies uncrossable by farm machinery.
- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 8- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P- Up to 25 percent of surface soil removed
- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level
- H- Accumulations 6 inches to 12 inches deep, level
- K- Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- Θ- Undifferentiated erosion (farmsteads, urban areas)

### LAND USE

Reproduced in gray

Cultivated land: annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land: Land formerly cultivated but now abandoned in annual grasses, crested wheat grasses, or browse

Range land: Annual or perennial grasses or sagelush

Woodland: Juniper or Ponderosa pine

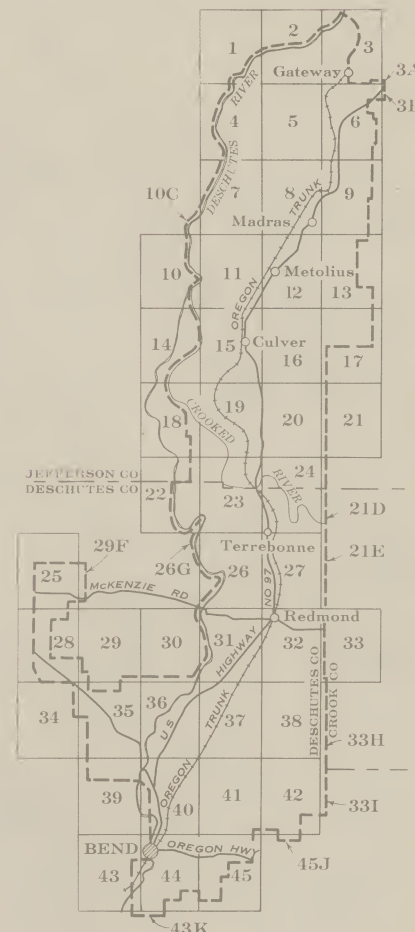
Idle land

Farmstead and urban areas

### SLOPE

	DOMINANT PERCENT		DOMINANT PERCENT
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

## INDEX



Approximate Mean Declination, 1945  
Annual Magnetic Change 11.6X West

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 5000 foot grid based upon Oregon system (North Zone). All plane coordinates with last three digits of grid numbers omitted. Polyconic projection indicated by marginal ticks.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads: Hard-surfaced
- Semihard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads: Single track

### WORKS AND STRUCTURES

- Railroads: Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine, quarry

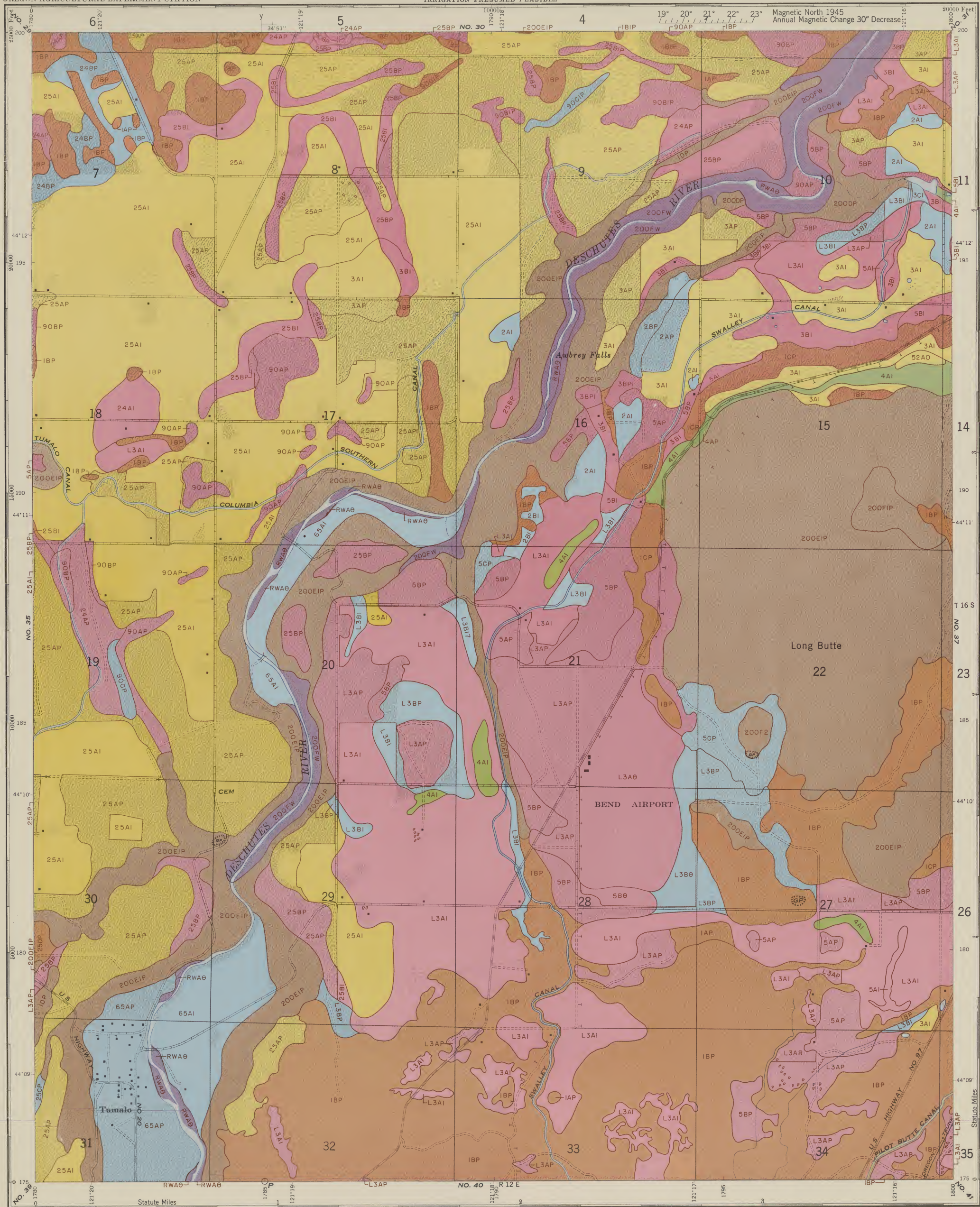
### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Springs
- Marsh
- Well
- Sinks





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands; essentially non-productive. |
|---|--|---|--|---|--|---|



DESCHUTES IRRIGATION PROJECT  
Scale 1:15,810

LEGEND

EXPLANATION OF SYMBOL

29-50% slope, Madras sandy loam; 30-50% slope, rippled to 12 percent  
31-50% slope, 25 percent to 75 percent, 10-15 percent, 25 percent to 75 percent removed by wind

SOILS

LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL  
2 Deschutes sandy loam, shallow phase  
3 Deschutes sandy loam  
43 Eri sandy loam  
L3 Deschutes heavy loam  
4 Deschutes sandy loam, deep phase  
5 Deschutes sandy loam  
19 Deschutes stony loam  
S43 Eri stony sandy loam

LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL  
10 Madras sandy loam, shallow phase  
10a Deschutes sandy loam, shallow phase  
12 Madras sandy loam, deep phase  
12c Deschutes sandy loam, deep phase  
13 Madras stony sandy loam  
13c Deschutes stony sandy loam  
19a Deschutes stony sandy loam  
26 Deschutes heavy sand  
26c Deschutes heavy sand  
24 Deschutes heavy sand

27 Madras sandy loam  
11c Deschutes sandy loam  
25 Deschutes sandy loam  
32 Madras loam  
LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS  
15 Madras sandy loam  
47 Deschutes heavy over the sand  
46 Deschutes heavy loam  
49 Deschutes heavy sandy loam  
65 Deschutes heavy sand over riverwash

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS  
30 Lamont sandy loam  
31 Lamont sandy loam  
32 Lamont stony sandy loam  
33 Lamont stony loam  
34 Lamont sandy loam, shallow phase  
84 Lamont loam, shallow phase

LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS  
35 Agency sandy loam  
37 Agency sandy loam  
70 Agency loam  
36 Agency sandy loam  
38 Agency sandy loam  
71 Agency loam  
73 Agency loam, shallow phase

LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDENED  
39 Madras loam  
40 Madras sandy loam  
68 Madras stony loam  
65 Madras clay loam

LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS  
42 Metolius sandy loam  
60 Metolius sandy loam  
61 Metolius fine sandy loam

62 Metolius sandy loam  
63 Metolius sandy loam  
64 Metolius sandy loam  
POORLY DRAINABLE, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS  
51 Odish clay loam  
52 Odish sandy loam

LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIALS  
74 Redmond loam  
75 Redmond sandy loam  
76 Redmond sandy loam, deep phase  
76 Redmond clay loam

MISCELLANEOUS SOILS  
100 Rough broken rock  
200 Rough stony loam  
RW Riverwash  
9T Volcanic ash  
1 Scabland

EROSION

SHEET EROSION  
1 Less than 25 percent of the surface soil lost  
2 25 percent to 75 percent of the surface soil lost  
3 75 percent to 100 percent of the surface soil lost  
4 25 percent to 50 percent of the B horizon lost  
GULLY EROSION  
7 Occasional rillings  
8 Occasional rillings, moderate by farm machinery  
9 Shallow gullies less than 100 feet apart laterally or more than 3 feet deep  
10 Occasional gullies less than 100 feet apart laterally or more than 3 feet deep  
WIND EROSION  
R Up to 25 percent of surface soil removed  
S 25 percent to 75 percent of surface soil removed  
T 75 percent to 100 percent of surface soil removed  
WIND DEPOSITS  
F Accumulations 0 inches to 6 inches deep, level  
H Accumulations 6 inches to 12 inches deep, level  
K Accumulations 12 inches to 12 inches deep, hummocky  
L Uneven accumulations too narrow to include within boundaries  
MISCELLANEOUS  
W Normal erosion  
O No accelerated erosion  
B Undifferentiated erosion (unimproved) (low, heavy)

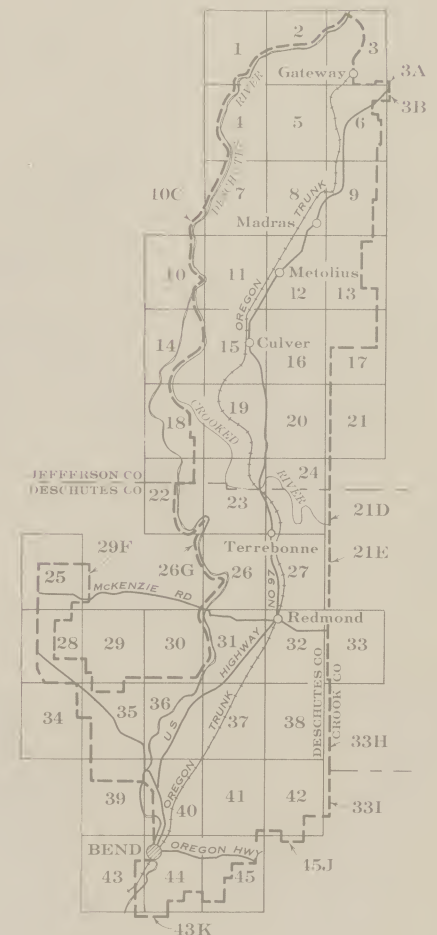
LAND USE  
Reproduced in gray

Cultivated land, annual and perennial crops such as grain, hay, alfalfa, clover and grasses  
Range land, land formerly cultivated on now abandoned, or annual grasses, forested wheat grasses, or brush  
Range land, brush or pasture grasses or hardwoods  
Woodsland, forest of Ponderosa pine  
Cleared  
Forested and wooded areas

SLOPE

DOMINANT PERCENT  
A 1 to 3  
B 4 to 7  
C 8 to 12  
D 13 to 20  
E 21 to 25  
F 26 and over

INDEX



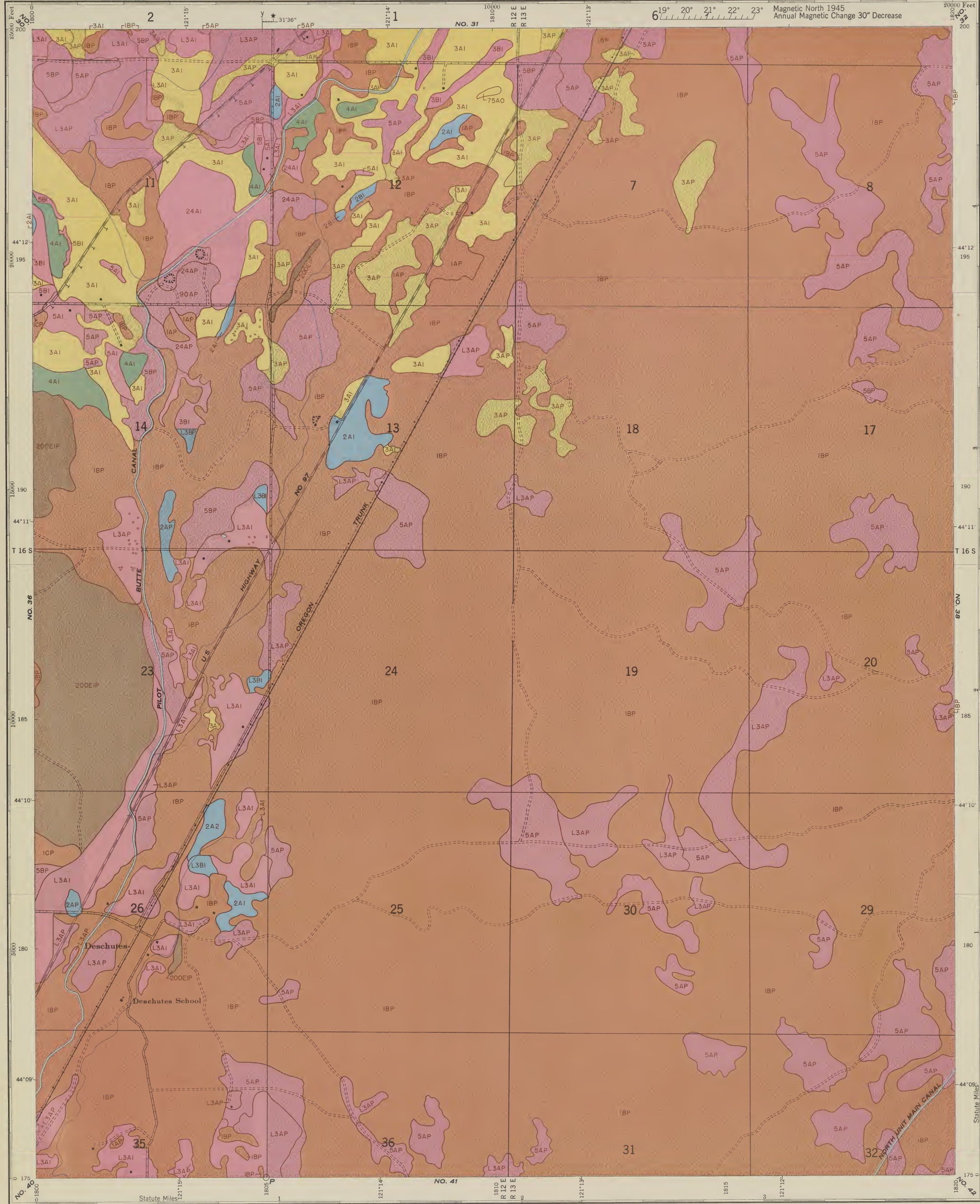
USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE PIVOT POINT 'P' ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

This film (12-55) showing the Deschutes River and conservation lands compiled by the Conservation Service from aerial photographs, Landsat imagery, and other data for the Deschutes River project. It shows the river and its tributaries, the Deschutes National Forest, and the Deschutes River National Monument. The film is a color print and is available for rental or purchase from the Conservation Service.

GEOGRAPHIC SYMBOLS

WORKS AND STRUCTURES	WORKS AND STRUCTURES	WORKS AND STRUCTURES	BOUNDARIES, MARKS, AND MONUMENTS	DRAINAGE (in feet)
Roads: Hard-surfaced	Roads: Gravel-surfaced	Railroad	County	Proportion of flow
Semi-hard-surfaced	Gravel-surfaced	Power line	Township	Intermittent stream
Bit (good motor)	Gravel-surfaced	Telephone line	Section	Canals or ditches
Gravel (good motor or private)	Gravel-surfaced	Power line	City	Water tunnel
Bridge	Gravel-surfaced	Conservation	Conservation survey data (in brown)	Water tank
Cover	Gravel-surfaced	Dams	Survey boundary	Wells
Ford	Gravel-surfaced	Gravel pit	Survey area	Arroyo, dry wash
Railroad: Single track	Gravel-surfaced	River water	Exclamation	Spring
				Stream





SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
|---|--|---|--|---|--|---|
| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands; essentially non-productive. |
|---|--|---|--|---|--|---|









VIII-Very steep, stony or droughty lands,  
essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

17-Silt (type Madras sandy loam); C-Slope 6 percent to 12 percent  
2-Sheet erosion, 25 percent to 75 percent lost; B-Wind erosion, 25 percent to 75 percent removed by wind

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2-Deschutes sandy loam, shallow phase
- 3-Deschutes silty loam
- 43-Era sandy loam
- L3-Deschutes loamy sand
- 4-Deschutes sandy loam, deep phase
- 5-Deschutes stony sandy loam
- 19-Deschutes stony loam
- S43-Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10-Madras sandy loam, shallow phase
- 10c-Deschutes sandy loam, shallow phase
- 12-Madras sandy loam, deep phase
- 12c-Deschutes sandy loam, deep phase
- 13-Madras stony sandy loam
- 13c-Deschutes stony sandy loam
- 90-Deschutes stony sandy loam
- 26-Deschutes loamy sand
- 9c-Deschutes loamy sand
- 24-Deschutes loamy sand

- 24-Madras sandy loam
- 11c-Deschutes sandy loam
- 25-Deschutes sandy loam
- 28-Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16-Metolius sandy loam
- 47-Deschutes loamy coarse sand
- 46-Deschutes loamy sand
- 49-Deschutes coarse sandy loam
- 65-Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30-Lamonta loam
- 31-Lamonta sandy clay loam
- 32-Lamonta stony sandy clay loam
- 33-Lamonta stony loam
- 34-Lamonta sandy clay loam, shallow phase
- 84-Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 36-Agency sandy loam
- 37-Agency gravelly loam
- 70-Glen loam
- 38-Agency loam
- 63-Agency stony loam
- 71-Glen clay loam
- 72-Metolius loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39-Madras loam
- 40-Madras sandy loam
- 68-Madras stony loam
- 85-Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42-Metolius sandy loam
- 60-Metolius sandy loam
- 61-Metolius fine sandy loam

- 62-Metolius sandy loam
- 92-Metolius heavy sand
- 6X-Laidley sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51-Glen clay loam
- 82-Older sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74-Redmond loam
- 75-Redmond sandy loam
- 75d-Redmond sandy loam, deep phase
- 76-Redmond clay loam

#### MISCELLANEOUS SOILS

- 100-Rough broken land
- 200-Rough stony land
- RW-Riverwash
- 91-Volcanic ash
- 1-Scabland

### EROSION

#### SHEET EROSION

- 1-Less than 25 percent of the surface soil lost
- 2-25 percent to 75 percent of the surface soil lost
- 3-75 percent to 100 percent of the surface soil lost
- 4-Up to 25 percent of the B horizon lost
- 5-25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

- 7-Occasional shallow gullies
- 7a-Occasional gullies uncrossable by farm machinery
- 8-Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 8a-Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P-Up to 25 percent of surface soil removed
- R-25 percent to 75 percent of surface soil removed
- S-75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F-Accumulations 0 inches to 6 inches deep, level
- H-Accumulations 6 inches to 12 inches deep, level
- K-Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W-Normal erosion
- O-No accelerated erosion
- 6-Undifferentiated erosion (flooded, gullies, etc.)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land, land formerly cultivated but now abandoned or annual and/or forested wheat, prairie, or brush

Range land, woods or permanent grasses or sagebrush

Woodland, juniper or Pinus ponderosa

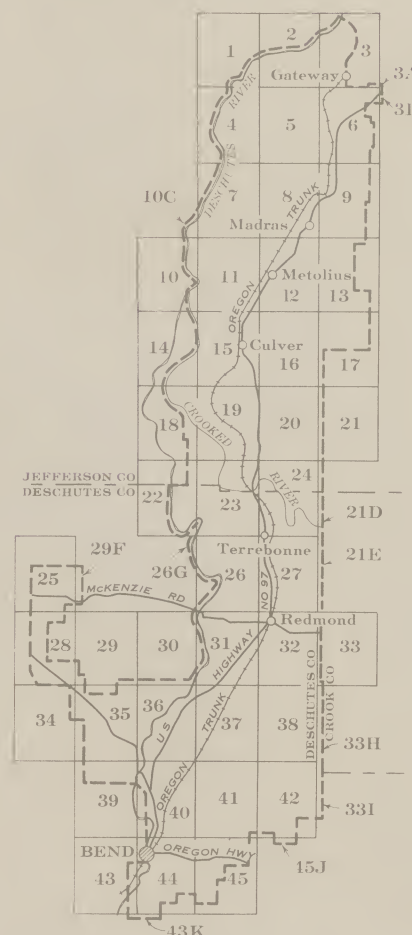
Idle land

Flooded and virgin area

### SLOPE

DOMINANT PERCENT	DOMINANT PERCENT
A 0 to 2	D 13 to 20
B 4 to 7	E 21 to 35
C 8 to 12	F 36 and over

## INDEX



Metolius, Madras, Culver, Terrebonne, Redmond, Bend, Oregon

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revised to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. Survey data and base map system, which show of land ownership, with last three digits of 1:25,000 scale, are shown. Information from other sources is shown.

## GEOGRAPHIC SYMBOLS

### WORKS AND STRUCTURES

- Roads - Hard-surfaced
- Semi-hard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads - Single track

### WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Grade crossing
- Gravelled road
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

### WORKS AND STRUCTURES

- Tank
- Power line
- Telephone line
- Pipe line
- Cement
- Dam
- Gravel pit
- Mine claim

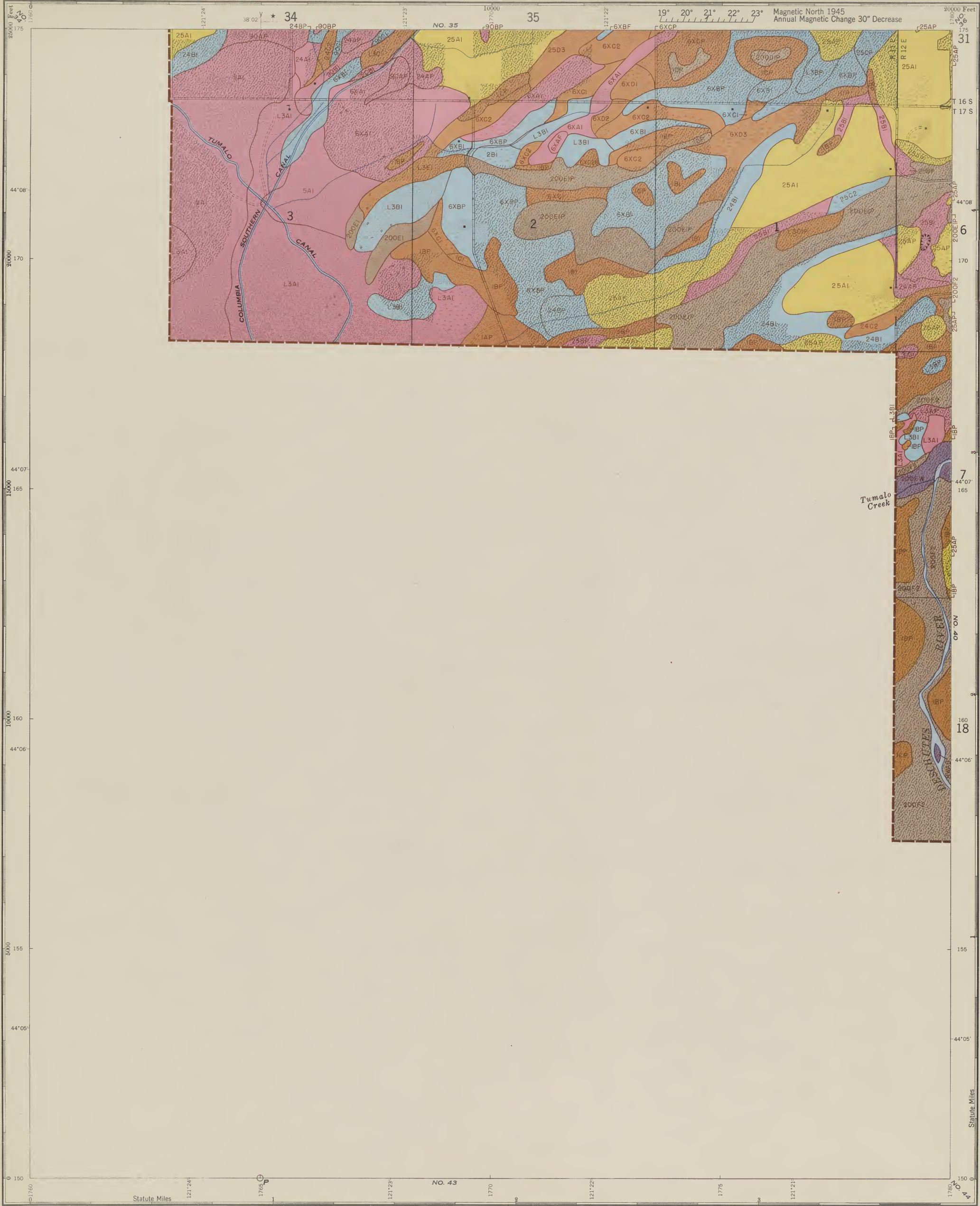
### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Survey line
- Rock outcrop
- Postament

### DRAINAGE

- Recessed stream
- Intermittent stream
- Channel in flood
- Canal tunnel
- Water tank
- Rock marsh
- Spring
- Marsh





SUITABLE FOR CULTIVATION		SUITABLE FOR OCCASIONAL CULTIVATION		NOT SUITABLE FOR CULTIVATION		NOT SUITABLE FOR CULTIVATION, RANGE OR SIMILAR USE	
I-Nearly level, deep, permeable soils having no special limitations in use.		II-Nearly level, moderately deep, permeable soils having minor limitations in use.		III-Moderately deep soils with stone, slope or texture limitations.		IV-Shallow, droughty or moderately sloping soils limited to pasture use.	
V-Sloping, very stony lands suited for range, having minor conservation needs.		VI-Sloping, very stony lands suited for range, having major conservation needs.		VII-Very steep, stony or droughty lands, essentially non-productive.			



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27 Soil type, Madras sandy loam. C- Slope, 8 percent to 12 percent.  
2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam.
- 43- Era sandy loam
- L3- Deschutes loamy sand.
- 4- Deschutes sandy loam, deep phase
- 5- Deschutes stony sandy loam.
- 19- Deschutes stony loam.
- S43 Era stony sandy loam.

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase.
- 10c- Deschutes sandy loam, shallow phase.
- 12- Madras sandy loam, deep phase.
- 12c- Deschutes sandy loam, deep phase.
- 13- Madras stony sandy loam.
- 13c- Deschutes stony sandy loam.
- 90- Deschutes stony sandy loam.
- 26- Deschutes loamy sand.
- 9c- Deschutes loamy sand.
- 24- Deschutes loamy sand.

- 27- Madras sandy loam.
- 11c- Deschutes sandy loam.
- 25- Deschutes sandy loam.
- 28- Madras loam.

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE, COARSE MATERIALS.

- 16- Metolius sandy loam.
- 47- Deschutes loamy coarse sand.
- 46- Deschutes loamy sand.
- 49- Deschutes coarse sandy loam.
- 65- Deschutes loamy sand over riverwash.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonta loam.
- 31- Lamonta sandy clay loam.
- 32- Lamonta stony sandy clay loam.
- 33- Lamonta stony loam.
- 34- Lamonta sandy clay loam, shallow phase.
- 84- Lamonta loam, shallow phase.

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- 35- Agency sandy loam.
- 37- Agency gravelly loam.
- 70- Gem loam.
- 36- Agency loam.
- 63- Agency stony loam.
- 71- Gem clay loam.
- 73- Gem clay loam, shallow phase.

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN.

- 39- Madras loam.
- 40- Madras sandy loam.
- 68- Madras stony loam.
- 85- Madras clay loam.

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS.

- 42- Metolius sandy loam.
- 60- Metolius sandy loam.
- 61- Metolius fine sandy loam.

- 62- Metolius sandy loam.
- 92- Metolius loamy sand.
- 6X- Laidlaw sandy loam.

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS.

- 51- Odin clay loam.
- 52- Odin sandy loam.

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS.

- 74- Redmond loam.
- 75- Redmond sandy loam.
- 75d- Redmond sandy loam, deep phase.
- 76- Redmond clay loam.

#### MISCELLANEOUS SOILS.

- 100- Rough broken land.
- 200- Rough stony land.
- RW- Riverwash.
- 91- Volcanic ash.
- 1- Scabland.

### EROSION

#### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 75 percent of the surface soil lost
- 3- 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4- 25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

- 7- Occasional shallow gullies
- ⑦- Occasional gullies uncrossable by farm machinery
- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- ⑧- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P- Up to 25 percent of surface soil removed
- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level
- H- Accumulations 6 inches to 12 inches deep, level
- K- Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- Θ- Undifferentiated erosion (farmsteads, urban areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land. Land formerly cultivated but now abandoned in annual grasses, crested wheat grasses, or browse

Range land. Annual or perennial grasses or sagebrush

Woodland. Juniper or Ponderosa pine

Idle land

Farmstead and urban area

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

- Roads- Hard-surfaced
- Semihard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads- Single track

#### WORKS AND STRUCTURES

- Railroads- Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

#### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

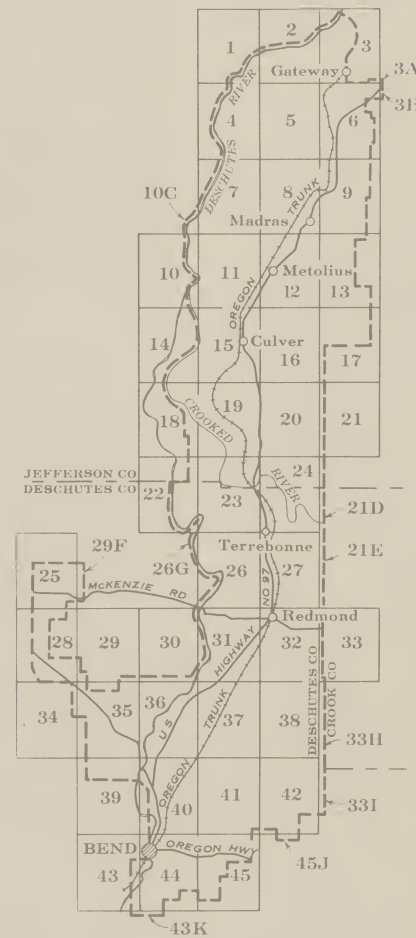
#### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- CONSERVATION SURVEY DATA (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

#### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Springs
- Sinks
- Marsh

## INDEX



Approximate Mean Declination, 1945  
Annual Magnetic Change 1'30" West

USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 5000' foot grid based upon Oregon system (North Zone). If plane coordinates with last three digits of grid number omitted. Projection projection indicated by marginal ticks.





VIII-Very steep, stony or droughty lands;  
essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27 Soil type, Madras sandy loam. C-Glue, 8 percent to 12 percent.  
22 Sheet erosion, 25 percent to 75 percent lost. R Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

2 - Deschutes sandy loam, shallow phase  
3 - Deschutes sandy loam  
43 - Era sandy loam  
L3 - Deschutes loamy sand  
4 - Deschutes sandy loam, deep phase  
5 - Deschutes stony sandy loam  
19 - Deschutes stony loam  
S43 - Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

10 - Madras sandy loam, shallow phase  
10c - Deschutes sandy loam, shallow phase  
12 - Madras sandy loam, deep phase  
12c - Deschutes loamy loam, deep phase  
13 - Madras stony sandy loam  
13c - Deschutes stony sandy loam  
90 - Deschutes stony sandy loam  
76 - Deschutes loamy sand  
9c - Deschutes loamy sand  
74 - Deschutes loamy sand

27 - Madras sandy loam  
11c - Deschutes sandy loam  
25 - Deschutes sandy loam  
28 - Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

16 - Metolius sandy loam  
47 - Deschutes loamy coarse sand  
46 - Deschutes loamy sand  
49 - Deschutes coarse sandy loam  
65 - Deschutes loamy sand over gravel

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

30 - Lamonta loam  
31 - Lamonta sandy clay loam  
32 - Lamonta stony sandy clay loam  
33 - Lamonta stony loam  
34 - Lamonta stony clay loam, shallow phase  
34 - Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

35 - Agency sandy loam  
37 - Agency gravelly loam  
70 - Gem loam  
36 - Agency loam  
64 - Agency stony loam  
71 - Gem clay loam  
75 - loam clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

39 - Madras loam  
40 - Metolius sandy loam  
68 - Madras clay loam  
85 - Metolius clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

42 - Metolius sandy loam  
60 - Metolius sandy loam  
60 - Metolius fine sandy loam

62 - Metolius sandy loam  
92 - Metolius loamy sand  
6X - Laidlaw sandy loam

#### POORLY DRAINED LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

51 - Odlin clay loam  
32 - Odlin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

74 - Redmond loam  
75 - Redmond sandy loam  
75d - Redmond sandy loam, deep phase  
76 - Redmond clay loam

#### MISCELLANEOUS SOILS

100 - Rough broken land  
200 - Rough stony land  
RW - Riverwash  
91 - Volcanic ash  
1 - Scale land

### EROSION

#### SHEET EROSION

1 - Less than 25 percent of the surface soil lost  
2 - 25 percent to 75 percent of the surface soil lost  
3 - 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost  
4 - 25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

7 - Occasional shallow gullies  
⑦ - Occasional gullies uncrossable by farm machinery  
8 - Shallow gullies less than 100 feet apart laterally or more than 3 per acre  
⑧ - Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

P - Up to 25 percent of surface soil removed  
R - 25 percent to 75 percent of surface soil removed  
S - 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

F - Accumulations 0 inches to 6 inches deep, level  
H - Accumulations 6 inches to 12 inches deep, level  
K - Accumulations 6 inches to 12 inches deep, hummocky  
— Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

W - Normal erosion  
O - No accelerated erosion  
Θ - Undifferentiated erosion (farmsteads, urban areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land, land formerly cultivated but now abandoned in annual grasses, crested wheat grasses, or briar

Range land, Annual or perennial grasses or sagebrush

Woodland, Juniper or Ponderosa pine

Idle land

Farmed land, urban area

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

Roads - Hard-surfaced  
Semi-hard-surfaced  
Dirt (good motor)  
Dirt (poor motor or private)  
Bridge  
Culvert  
Ford  
Railroads - Single track

#### WORKS AND STRUCTURES

Railroads - Abandoned  
Bridge  
Grade crossing  
Railroad under  
Railroad over  
Tunnel  
Buildings in general  
Church  
School

#### WORKS AND STRUCTURES

Tanks  
Power line  
Telephone line  
Pipe line  
Cemeteries  
Dams  
Gravel pit  
Mine, quarry

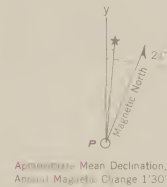
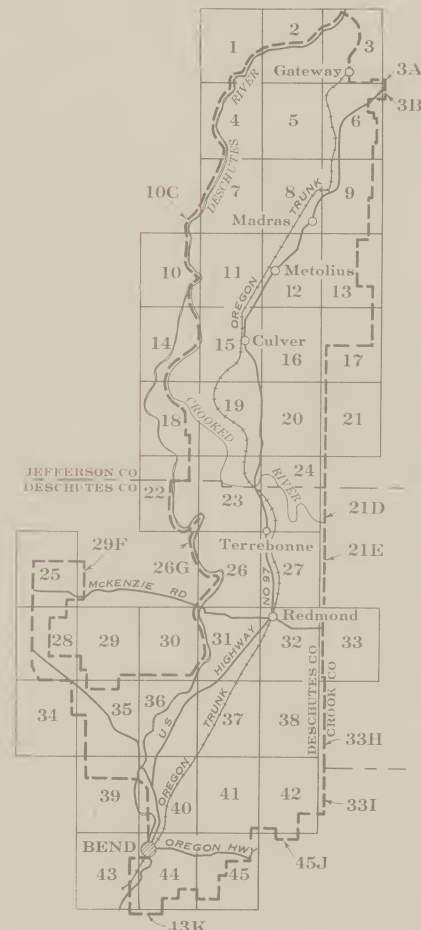
#### BOUNDARIES, MARKS, AND MONUMENTS

County  
Township  
Section  
City  
CONSERVATION SURVEY DATA (in brown)  
Survey boundary  
Stony areas  
Escarpment

#### DRAINAGE (in blue)

Perennial streams  
Intermittent streams  
Ditches or ditches  
Canal tunnel  
Water tanks  
Well  
Ponds, reservoirs  
Springs  
Sinks  
Marsh

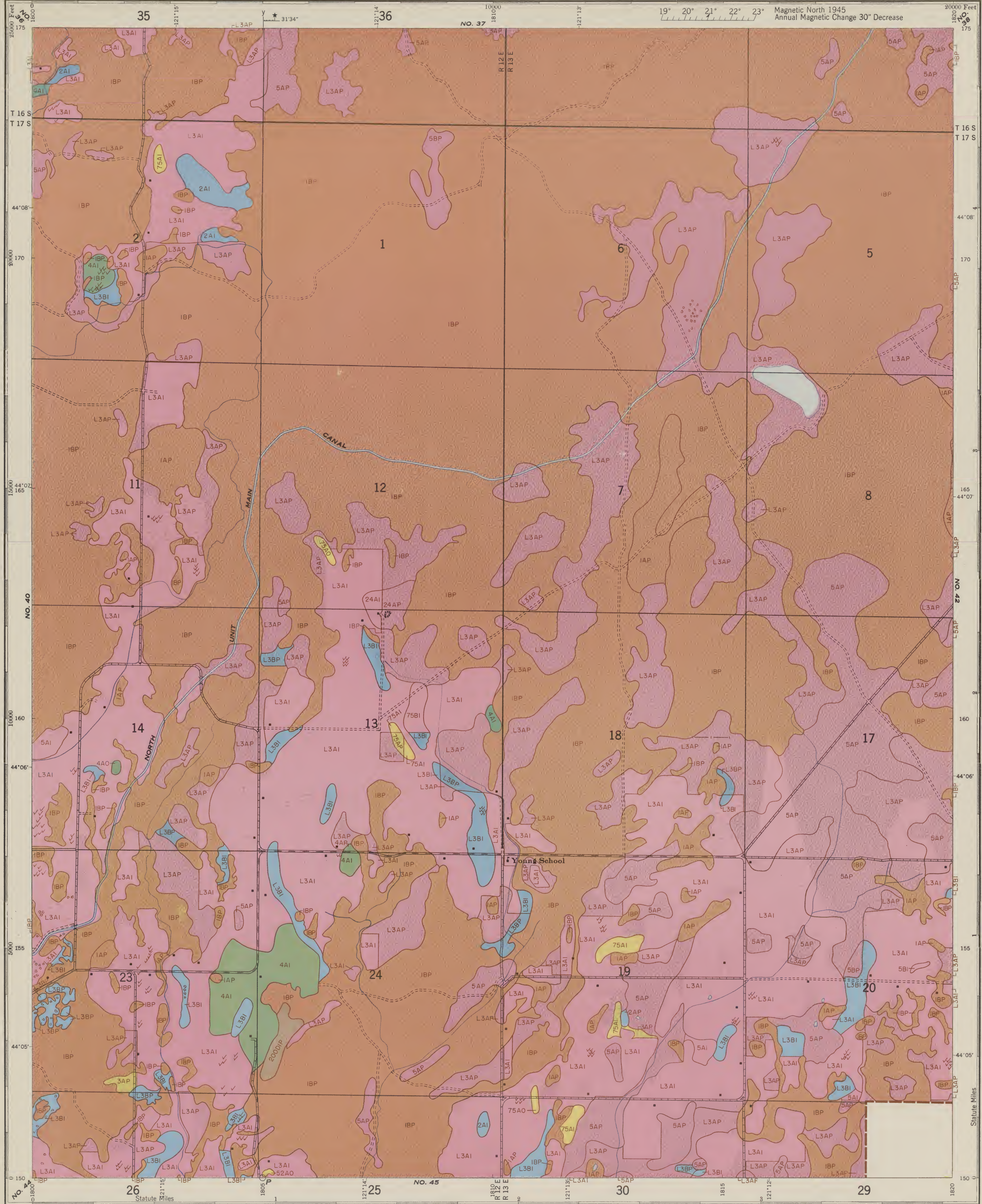
## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

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SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

NOT SUITABLE FOR CULTIVATION,  
RANGE OR SIMILAR USE

I-Nearly level, deep, permeable soils having no special limitations in use.

II-Nearly level, moderately deep, permeable soils having minor limitations in use.

III-Moderately deep soils with stone, slope or texture limitations.

IV-Shallow, droughty or moderately sloping soils limited to pasture use.

VI-Sloping, very stony lands suited for range, having minor conservation needs.

VII-Steep, very stony lands suited for range, having major conservation needs.

VIII-Very steep, stony or droughty lands; essentially non-productive.



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27 Soil type, Madras sandy loam. C Slope, 8 percent to 12 percent.  
2 Sheet erosion, 25 percent to 75 percent lost. R Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 Deschutes sandy loam, shallow phase
- 3 Deschutes sandy loam
- 43 Era sandy loam
- L3 Deschutes loamy sand
- 4 Deschutes sandy loam, deep phase
- 5 Deschutes stony sandy loam
- 19 Deschutes stony loam
- S43 Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 Madras sandy loam, shallow phase
- 10c Deschutes sandy loam, shallow phase
- 12 Madras sandy loam, deep phase
- 12c Deschutes sandy loam, deep phase
- 13 Madras stony sandy loam
- 13c Deschutes stony sandy loam
- 90 Deschutes stony sandy loam
- 26 Deschutes loamy sand
- 9c Deschutes loamy sand
- 24 Deschutes loamy sand

- 27 Madras sandy loam
- 11c Deschutes sandy loam
- 25 Deschutes sandy loam
- 28 Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16 Metolius sandy loam
- 47 Deschutes loamy coarse sand
- 46 Deschutes loamy sand
- 49 Deschutes coarse sandy loam
- 65 Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30 Lamonta loam
- 31 Lamonta sandy clay loam
- 32 Lamonta stony sandy clay loam
- 33 Lamonta stony loam
- 34 Lamonta sandy clay loam, shallow phase
- 84 Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35 Agency sandy loam
- 37 Agency gravelly loam
- 70 Gem loam
- 36 Agency loam
- 83 Agency stony loam
- 71 Gem clay loam
- 75 Gem clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 39 Madras loam
- 40 Madras sandy loam
- 68 Madras stony loam
- 85 Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42 Metolius sandy loam
- 60 Metolius sandy loam
- 61 Metolius fine sandy loam

- 92 Metolius sandy loam
- 92 Metolius loamy sand
- 6X Laidlaw sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51 Odin clay loam
- 52 Odin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 Redmond loam
- 75 Redmond sandy loam
- 75d Redmond sandy loam, deep phase
- 76 Redmond clay loam

#### MISCELLANEOUS SOILS

- 100 Rough broken land
- 200 Rough stony land
- RW Riverwash
- 91 Volcanic ash
- 1 Scabland

### EROSION

#### SHEET EROSION

- 1 Less than 25 percent of the surface soil lost
- 2 25 percent to 75 percent of the surface soil lost
- 3 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

- 7 Occasional shallow gullies
- 7 Occasional gullies uncrossable by farm machinery
- 8 Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 8 Occasional gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P Up to 25 percent of surface soil removed
- R 25 percent to 75 percent of surface soil removed
- S 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F Accumulations 0 inches to 6 inches deep, level
- H Accumulations 6 inches to 12 inches deep, level
- K Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W Normal erosion
- O No accelerated erosion
- 9 Undifferentiated erosion (farmfields, urban areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land, land formerly cultivated but now abandoned, in annual grasses, creosote, wheat grasses, or browse

Range land, Annual or perennial grazed or sagebrush

Woodsland, Juniper or ponderosa pine

Idle land

Farmstead and urban area

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
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- Roads - Hard-surfaced
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- Dirt (poor motor or private)
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- Culvert
- Ford
- Railroads - Single track

#### WORKS AND STRUCTURES

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- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

#### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine quarry

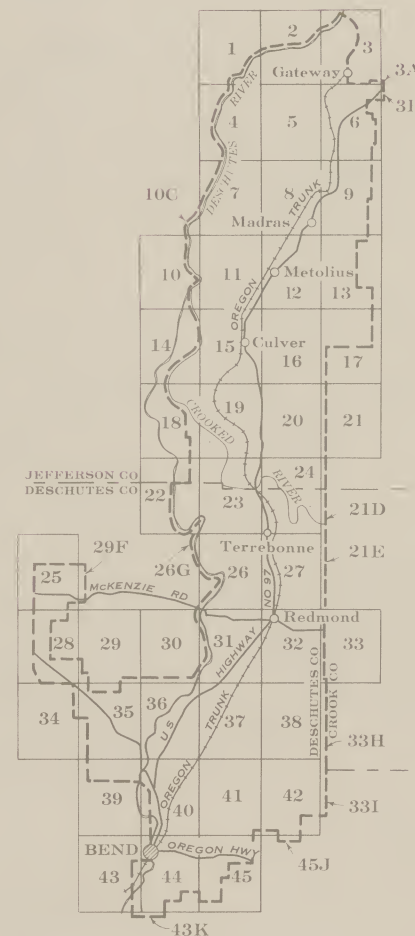
#### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- CONSERVATION SURVEY DATA (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

#### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Catchment ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Spring
- Sinks
- Marsh

## INDEX



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VIII-Very steep, stony or droughty lands;  
essentially non-productive.



DESCHUTES IRRIGATION PROJECT  
Scale 1:15,840

LEGEND

EXPLANATION OF SYMBOL

27-500 type, Madras sandy loam. C Slope, 8 percent to 12 percent.  
2- Sheet erosion, 25 percent to 75 percent lost. R- Wind erosion, 25 percent to 75 percent removed by wind.

SOILS

LIGHT AND COARSE TEXTURED SOIL  
WITH LIGHT TEXTURED SUBSOILS OVER  
BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Era sandy loam
- 13- Deschutes loamy sand
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- S43- Era stony sandy loam

LIGHT AND MEDIUM TEXTURED SOIL WITH  
LIGHT TEXTURED SUBSOILS OVER MODERATELY  
CONSOLIDATED MATERIAL

- 10- Madras sandy loam, shallow phase
- 10c- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
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- 90- Deschutes stony sandy loam
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- 9c- Deschutes loamy sand
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- 11c- Deschutes sandy loam
- 25- Deschutes sandy loam
- 28- Madras loam

LIGHT TEXTURED SOIL WITH LIGHT  
TEXTURED SUBSOILS OVER LOOSE  
COARSE MATERIALS

- 16- Metolius sandy loam
- 47- Deschutes loamy coarse sand
- 46- Deschutes loamy sand
- 49- Deschutes coarse sandy loam
- 65- Deschutes loamy sand over hardpan

LIGHT TO HEAVY TEXTURED SOIL WITH  
HEAVY TEXTURED SUBSOILS OVER MIXED  
MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonta loam
- 31- Lamonta sandy clay loam
- 32- Lamonia silty sandy clay loam
- 33- Lamonta silty loam
- 34- Lamonta silty clay loam, shallow phase
- 84- Lamonta loam, shallow phase

LIGHT TO HEAVY TEXTURED SOIL WITH  
MODERATELY HEAVY TEXTURED SUBSOILS  
OVER BASALT OR SIMILAR MATERIALS

- 55- Agency sandy loam
- 37- Agency gravelly loam
- 70- Gem loam
- 46- Agency loam
- 63- Agency stony loam
- 71- Gem clay loam
- 73- Gem clay loam, shallow phase

LIGHT TO HEAVY TEXTURED SOIL WITH  
HEAVY TEXTURED SUBSOILS OVER LIME  
HARDPAN

- 49- Madras loam
- 40- Madras sandy loam
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LIGHT TEXTURED SOIL WITH DEEP, LIGHT  
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POORLY DRAINED, LIGHT TEXTURED  
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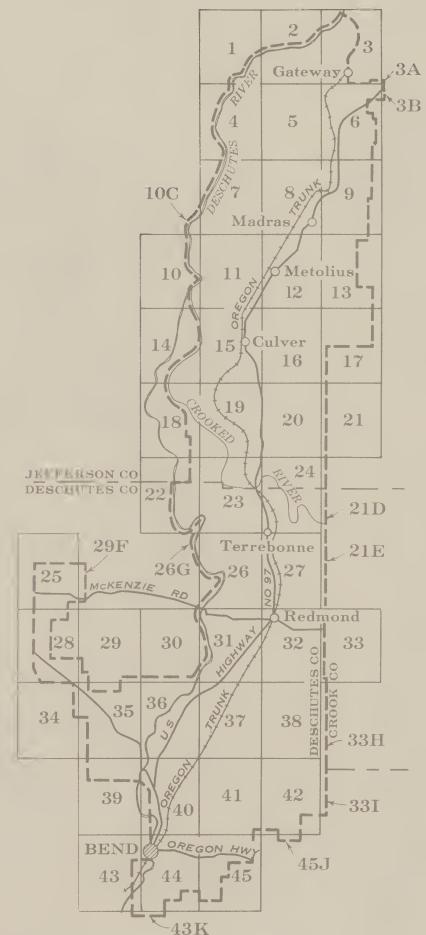
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- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
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WIND EROSION

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- S- 75 percent to 100 percent of surface soil removed

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- Line accumulations too narrow to include within boundaries

MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- 6- Undifferentiated erosion (farmsteads, urban areas)

LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land- Land formerly cultivated but now abandoned, in annual grasses, perennial wheat grasses, or brush

Range land- Annual or perennial grasses or sagebrush

Woodland- Juniper or Ponderosa pine

Idle land

Farmstead and urban area

SLOPE

DOMINANT PERCENT	DOMINANT PERCENT
A 0 to 3	D 13 to 20
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GEOGRAPHIC SYMBOLS

WORKS AND STRUCTURES

- Roads- Hard-surfaced
- Semihard-surfaced
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- Railroads- Single track

WORKS AND STRUCTURES

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- Railroad over
- Tunnel
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- Church
- School

WORKS AND STRUCTURES

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- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine, quarry

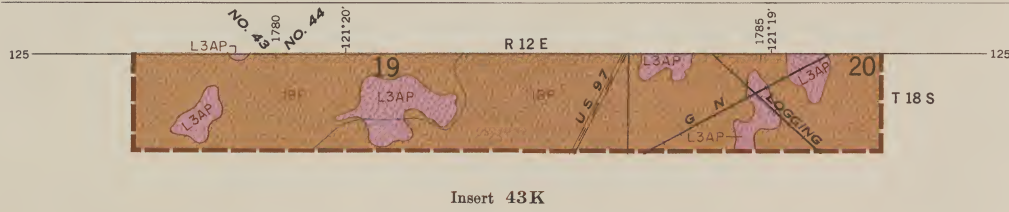
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DRAINAGE (in blue)

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- Intermittent streams
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- Water tanks
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- Sinks
- Marsh



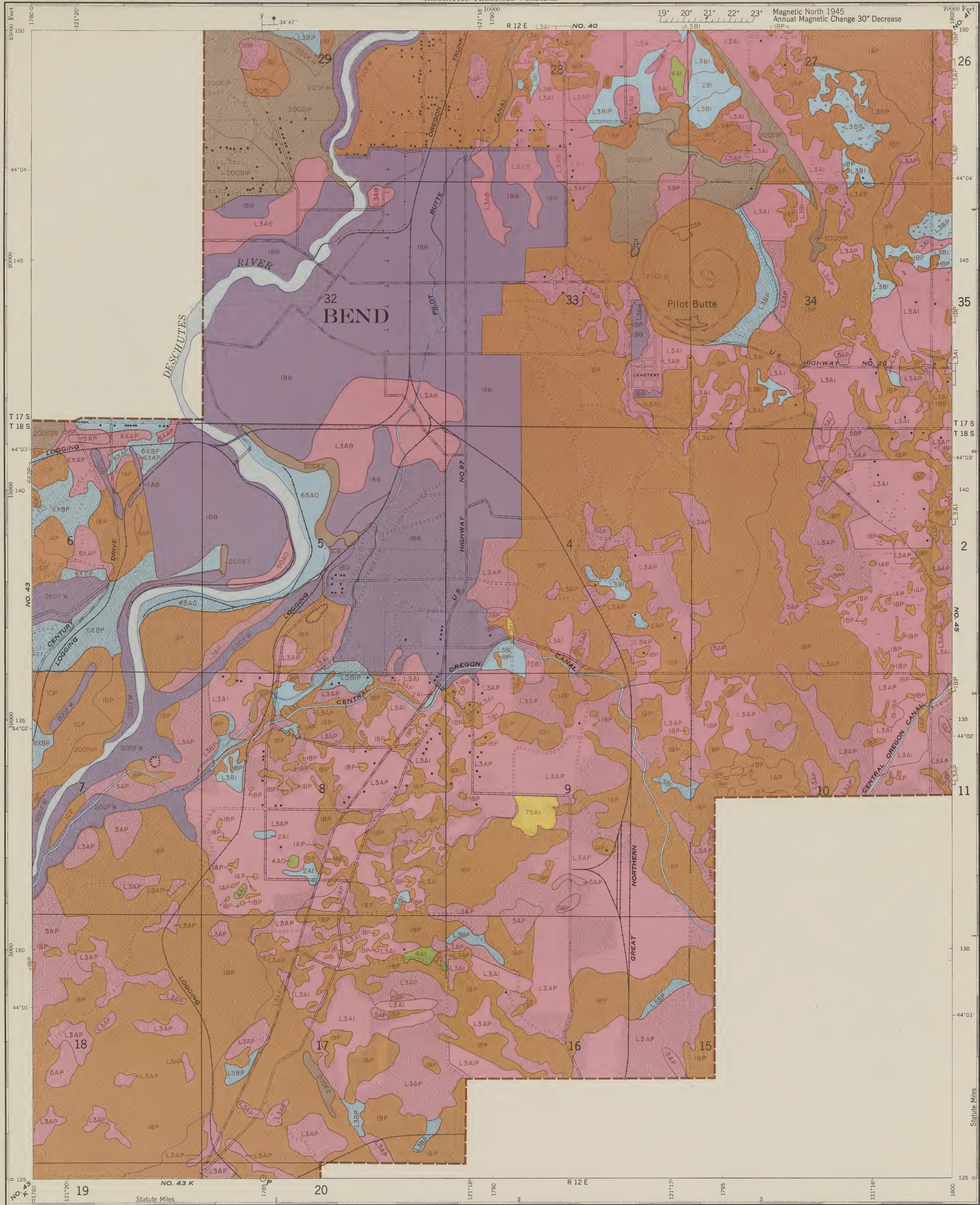


SUITABLE FOR CULTIVATION			SUITABLE FOR OCCASIONAL CULTIVATION		NOT SUITABLE FOR CULTIVATION		NOT SUITABLE FOR CULTIVATION, RANGE OR SIMILAR USE
I-Nearly level, deep, permeable soils having no special limitations in use.	II-Nearly level, moderately deep, permeable soils having minor limitations in use.	III-Moderately deep soils with stone, slope or texture limitations.	IV-Shallow, droughty or moderately sloping soils limited to pasture use.	VI-Sloping, very stony lands suited for range, having minor conservation needs.	VII-Steep, very stony lands suited for range, having major conservation needs.	VIII-Very steep, stony or droughty lands; essentially non-productive.	









SUITABLE FOR CULTIVATION

SUITABLE FOR OCCASIONAL  
CULTIVATION

NOT SUITABLE FOR CULTIVATION

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RANGE OR SIMILAR USE

- |   |  |   |  |   |  |   |
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| I-Nearly level, deep, permeable soils having no special limitations in use. | II-Nearly level, moderately deep, permeable soils having minor limitations in use. | III-Moderately deep soils with stone, slope or texture limitations. | IV-Shallow, droughty or moderately sloping soils limited to pasture use. | VI-Sloping, very stony lands suited for range, having minor conservation needs. | VII-Steep, very stony lands suited for range, having major conservation needs. | VIII-Very steep, stony or droughty lands; essentially non-productive. |
|---|--|---|--|---|--|---|



# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

27C2R  
27- Soil type Madras sandy loam, 0-5 slope, 5 percent to 12 percent  
2- Slope erosion, 25 percent to 75 percent lost R- Wind erosion, 25 percent to 75 percent removed by wind

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2- Deschutes sandy loam, shallow phase
- 3- Deschutes sandy loam
- 43- Era sandy loam
- 13- Deschutes loamy sand
- 4- Deschutes stony loam, deep phase
- 5- Deschutes stony sandy loam
- 19- Deschutes stony loam
- S43- Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10- Madras stony loam, shallow phase
- 10c- Deschutes sandy loam, shallow phase
- 12- Madras sandy loam, deep phase
- 12c- Deschutes sandy loam, deep phase
- 33- Madras stony sandy loam
- 13c- Deschutes stony sandy loam
- 50- Deschutes stony sandy loam
- 26- Deschutes loamy sand
- 5c- Deschutes loamy sand
- 24- Deschutes loamy sand

- 27- Madras sandy loam
- 11c- Deschutes sandy loam
- 25- Deschutes sandy loam
- 28- Madras loam

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 16- Metolius sandy loam
- 47- Deschutes loam, coarse sand
- 46- Deschutes loam, sand
- 49- Deschutes loam, sandy loam
- 65- Deschutes loam, sand and gravel

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30- Lamonta loam
- 31- Lamonta sandy clay loam
- 32- Lamonta stony sandy clay loam
- 33- Lamonta stony loam
- 34- Lamonta sandy clay loam, shallow phase
- S4- Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATE TO HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35- Agency sandy loam
- 37- Agency gravelly loam
- 70- Agency loam
- 46- Agency loam
- 63- Agency stony loam
- 71- Agency clay loam
- 73- Clay clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOILS WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDPAN

- 30- Madras loam
- 40- Madras sandy loam
- 68- Madras stony loam
- 65- Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 42- Metolius sandy loam
- 60- Metolius sandy loam
- 61- Metolius fine sandy loam

- 62- Metolius sandy loam
- 92- Metolius sandy loam
- 6X- Laidlaw sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 51- Olin clay loam
- 52- Olin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74- Redmond loam
- 75- Redmond sandy loam
- 75d- Redmond sandy loam, deep phase
- 76- Redmond clay loam

#### MISCELLANEOUS SOILS

- 100- Rough broken land
- 200- Rough stony land
- RW- Roadwash
- 91- Volcanic ash
- L- Scabland

### EROSION

#### SHEET EROSION

- 1- Less than 25 percent of the surface soil lost
- 2- 25 percent to 75 percent of the surface soil lost
- 3- 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4- 25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

- 7- Occasional shallow gullies
- ⑦- Occasional gullies uncrossable by farm machinery
- 8- Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- ⑧- Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P- Up to 25 percent of surface soil removed
- R- 25 percent to 75 percent of surface soil removed
- S- 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F- Accumulations 0 inches to 6 inches deep, level
- H- Accumulations 6 inches to 12 inches deep, level
- K- Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W- Normal erosion
- O- No accelerated erosion
- Θ- Undifferentiated erosion (armisteads, urban areas)

### LAND USE

Reproduced in gray

Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and grasses

Range land, land formerly cultivated but now abandoned in annual grasses, prairie wheat grasses, or hay

Range land, annual or perennial grasses or sagebrush

Woodland, Juniper or Ponderosa pine

Idle land

Farmstead and other area

### SLOPE

DOMINANT PERCENT		DOMINANT PERCENT	
A	0 to 3	D	13 to 20
B	4 to 7	E	21 to 35
C	8 to 12	F	36 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

- Roads- Hard-surfaced
- Semi-hard-surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads- Single track

#### WORKS AND STRUCTURES

- Railroads- Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

#### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine, quarry

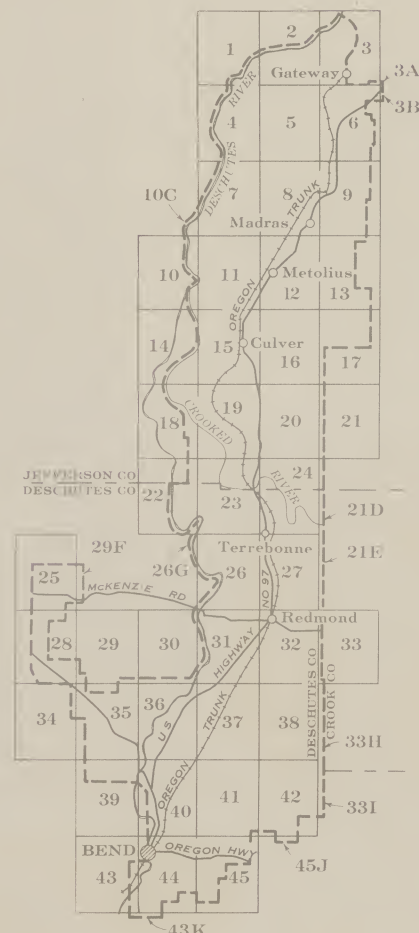
#### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Trunk areas
- Escarpment

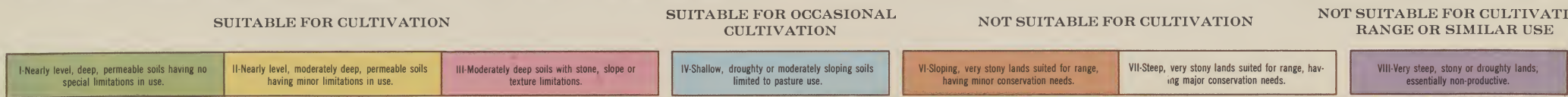
#### DRAINAGE (in blue)

- Potential streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Ponds, reservoirs
- Springs
- Marsh

## INDEX









# DESCHUTES IRRIGATION PROJECT

Scale 1:15,840

## LEGEND

### EXPLANATION OF SYMBOL

2702R  
27 Soil type, Madras sandy loam, C 5 slope, 8 percent to 12 percent.  
28 Sheet erosion, 25 percent to 75 percent lost. 4 Wind erosion, 25 percent to 75 percent removed by wind.

### SOILS

#### LIGHT AND COARSE TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIAL

- 2 Deschutes sandy loam, shallow phase
- 3 Deschutes sandy loam
- 43 Era sandy loam
- 43 Deschutes (sandy loam)
- 4 Deschutes sandy loam, deep phase
- 5 Deschutes stony sandy loam
- 19 Deschutes stony loam
- 543 Era stony sandy loam

#### LIGHT AND MEDIUM TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER MODERATELY CONSOLIDATED MATERIAL

- 10 Madras sandy loam, shallow phase
- 10c Deschutes sandy loam, shallow phase
- 12 Madras sandy loam, deep phase
- 12c Deschutes sandy loam, deep phase
- 13 Madras stony sandy loam
- 13c Deschutes stony sandy loam
- 50 Deschutes stony sandy loam
- 26 Deschutes loamy sand
- 26c Deschutes loamy sand
- 24 Deschutes loamy sand

#### LIGHT TEXTURED SOIL WITH LIGHT TEXTURED SUBSOILS OVER LOOSE COARSE MATERIALS

- 27 Madras sandy loam
- 43c Deschutes sandy loam
- 25 Deschutes sandy loam
- 28 Madras loam
- 16 Metolius sandy loam
- 47 Deschutes loamy granite soil
- 46 Deschutes loamy sand
- 49 Deschutes coarse sandy loam
- 65 Deschutes loamy sand over riverwash

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS OVER MIXED MODERATELY CONSOLIDATED MATERIALS

- 30 Lamonta loam
- 31 Lamonta sandy clay loam
- 32 Lamonta stony sandy clay loam
- 33 Lamonta stony loam
- 34 Lamonta sandy clay loam, shallow phase
- 84 Lamonta loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH MODERATELY HEAVY TEXTURED SUBSOILS OVER BASALT OR SIMILAR MATERIALS

- 35 Agency sandy loam
- 37 Agency gravelly loam
- 70 Gent loam
- 36 Agency loam
- 63 Agency stony loam
- 71 Gent clay loam
- 73 Gent clay loam, shallow phase

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS OVER LIME HARDEN

- 32 Madras loam
- 40 Madras sandy loam
- 68 Madras stony loam
- 85 Madras clay loam

#### LIGHT TEXTURED SOIL WITH DEEP, LIGHT TEXTURED SUBSOIL OVER PERMEABLE MATERIALS

- 45 Metolius sandy loam
- 60 Metolius sandy loam
- 61 Metolius stony sandy loam

#### POORLY DRAINED, LIGHT TEXTURED SURFACE SOIL WITH HEAVY TEXTURED SUBSOIL OVER BASALT OR MIXED CONSOLIDATED MATERIALS

- 52 Metolius sandy loam
- 92 Metolius (sandy sand)
- 9X Laflaw sandy loam
- 51 Odin clay loam
- 62 Odin sandy loam

#### LIGHT TO HEAVY TEXTURED SOIL WITH HEAVY TEXTURED SUBSOILS MODERATELY CONSOLIDATED MATERIALS

- 74 Redmond loam
- 75 Redmond sandy loam
- 75d Redmond sandy loam, deep phase
- 76 Redmond clay loam

#### MISCELLANEOUS SOILS

- 100 Redmond loam
- 100c Redmond loam
- 100d Redmond loam
- 100e Redmond loam
- 100f Redmond loam
- 100g Redmond loam
- 100h Redmond loam
- 100i Redmond loam
- 100j Redmond loam
- 100k Redmond loam
- 100l Redmond loam
- 100m Redmond loam
- 100n Redmond loam
- 100o Redmond loam
- 100p Redmond loam
- 100q Redmond loam
- 100r Redmond loam
- 100s Redmond loam
- 100t Redmond loam
- 100u Redmond loam
- 100v Redmond loam
- 100w Redmond loam
- 100x Redmond loam
- 100y Redmond loam
- 100z Redmond loam

### EROSION

#### SHEET EROSION

- 1 Less than 25 percent of the surface soil lost
- 2 25 percent to 75 percent of the surface soil lost
- 3 75 percent to 100 percent of the surface soil lost or up to 25 percent of the B horizon lost
- 4 25 percent to 50 percent of the B horizon lost

#### GULLY EROSION

- 7 Occasional shallow gullies
- 7c Occasional gullies uncrossable by farm machinery
- 8 Shallow gullies less than 100 feet apart laterally or more than 3 per acre
- 8c Uncrossable gullies less than 100 feet apart laterally or more than 3 per acre

#### WIND EROSION

- P Up to 25 percent of surface soil removed
- R 25 percent to 75 percent of surface soil removed
- S 75 percent to 100 percent of surface soil removed

#### WIND DEPOSITS

- F Accumulations 0 inches to 6 inches deep, level
- H Accumulations 6 inches to 12 inches deep, level
- K Accumulations 6 inches to 12 inches deep, hummocky
- Line accumulations too narrow to include within boundaries

#### MISCELLANEOUS

- W Normal erosion
- O No accelerated erosion
- Θ Undifferentiated erosion (farmsteads, urban areas)

### LAND USE

Reproduced in gray

- Cultivated land, annual and perennial crops such as grain, row crops, alfalfa, clover and prairie
- Rangeland, land formerly cultivated by some abandoned or marginal grazings, created where animals or lawns
- Rangeland, annual or perennial grasses or legumes
- Woodland, Juniper or Ponderosa pine
- Idle land
- Farmstead and quarry area

### SLOPE

Dominant Percent	Dominant Percent
A 0 to 3	D 13 to 20
B 4 to 7	E 21 to 35
C 8 to 12	F 36 and over

### GEOGRAPHIC SYMBOLS

#### WORKS AND STRUCTURES

- Roads - Hard surfaced
- Semihard surfaced
- Dirt (good motor)
- Dirt (poor motor or private)
- Bridge
- Culvert
- Ford
- Railroads - Single track

#### WORKS AND STRUCTURES

- Railroads - Abandoned
- Bridge
- Grade crossing
- Railroad under
- Railroad over
- Tunnel
- Buildings in general
- Church
- School

#### WORKS AND STRUCTURES

- Tanks
- Power line
- Telephone line
- Pipe line
- Cemeteries
- Dams
- Gravel pit
- Mine, quarry

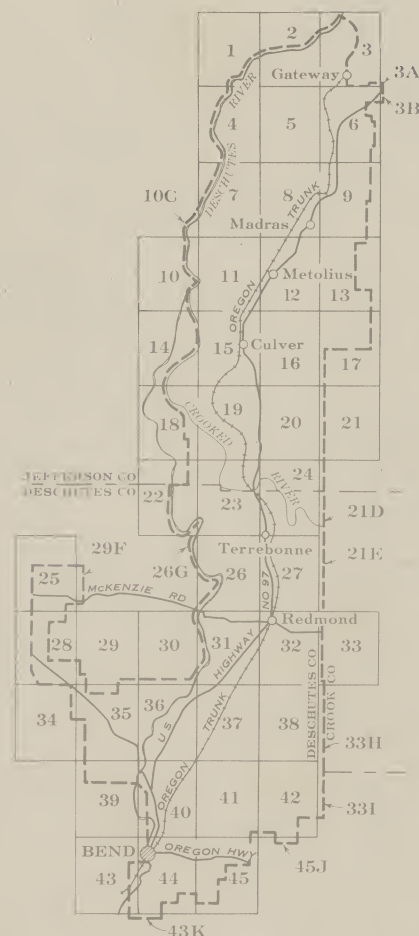
#### BOUNDARIES, MARKS, AND MONUMENTS

- County
- Township
- Section
- City
- Conservation Survey Data (in brown)
- Survey boundary
- Stony areas
- Rock outcrops
- Escarpment

#### DRAINAGE (in blue)

- Perennial streams
- Intermittent streams
- Canals or ditches
- Canal tunnel
- Water tanks
- Well
- Ponds, reservoirs
- Sinks
- Marsh

## INDEX



USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES TO DETERMINE MAGNETIC NORTH LINE. CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE ARROW AS SHOWN ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP.

Base from U.S.G.S. quadrangles. Revisions to base and conservation survey compiled by Soil Conservation Service from aerial photographs. Lambert projection. 6000 foot grid based upon Oregon system (North Zone) of plane coordinates with last three digits of grid number omitted. Polyconic projection indicated by marginal ticks.



NO. BF 071107  
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